

SUMMARY OF DEGREES FOR 1961

DEGREES IN COURSE

BACHELOR OF ARTS	109
BACHELOR OF BUS.ADM.	6
BACHELOR OF SCIENCE IN BUS. ADM.	16
BACHELOR OF SCIENCE IN BUS.ADM. (EVE.COLL.)	11
BACHELOR OF SCIENCE IN GEN.ST. (EVE.COLL.)	11

DEGREES IN COURSE

MASTER OF ARTS	33
MASTER OF ARTS IN EDUC.	23
DOCTOR OF PHILOSOPHY	19

HONORARY DEGREES

DOCTOR OF LAWS	2
DOCTOR OF LETTERS	1

Nov. 16, 1961

Clark University Bulletin

WORCESTER 10, MASSACHUSETTS

General Catalog 1961/62



Inquiries to the university should be directed as follows:

<i>General University Affairs:</i>	Dr. Howard B. Jefferson, President
<i>General College Affairs:</i>	Dr. Robert F. Campbell, Dean of the College
<i>Admission to the College:</i>	Dr. George H. Merriam, Director of Admissions
<i>Undergraduate Student Financial Aid:</i>	Mr. John L. Roche, Financial Aid Officer
<i>Graduate School Affairs:</i>	Dr. Sherman S. Hayden, Secretary of the Graduate Board
<i>Admission to the Graduate School:</i>	Dr. Sherman S. Hayden, Secretary of the Graduate Board, or Chairman of the Graduate Department Concerned
<i>Evening College Affairs:</i>	Mr. Thomas J. Dolphin, Director
<i>Summer School Affairs:</i>	Dr. Roger C. Van Tassel, Director
<i>Alumni Affairs:</i>	Mr. Henry L. Signor, Alumni Secretary
<i>Records and Transcripts:</i>	Mrs. Lydia Colby, Registrar
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Academic Calendar for 1961-62

1961

Monday, September 11	Freshman orientation for women begins.
Tuesday, September 12	Freshman orientation for men begins.
Monday, September 18	Upper class registration.
Tuesday, September 19	First classes.
Thursday, October 12	Columbus Day. Not a holiday.
Wednesday, November 1	Last day for receiving applications for admission to candidacy for the degree of Doctor of Philosophy in June, 1962.
Saturday, November 11	Veterans' Day. Not a holiday.
Monday, November 13	Mid-semester reports due at Registrar's Office at 9 a.m.
Wednesday, November 22	Beginning of Thanksgiving recess at close of classes.
Monday, November 27	Thanksgiving Recess ends at 8:30 a.m.
Saturday, December 16	Beginning of Christmas recess at close of classes.

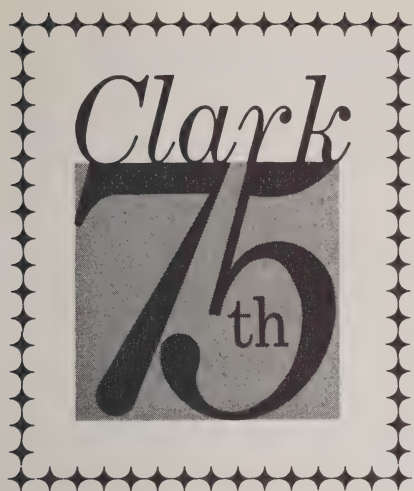
1962

Wednesday, January 3	End of Christmas recess at 8:30 a.m.
Wednesday, January 17	No classes.
Thursday, January 18	No classes.
Friday, January 19	Semester examinations begin.
Saturday, January 27	Mid-year recess begins at close of examinations.
Monday, February 5	Second semester registration.
Tuesday, February 6	Second semester classes begin.
Friday, February 9	Last day for receiving applications for admission to candidacy for the degrees of Master of Arts and Master of Arts in Education in June, 1962.
Thursday, February 22	Washington's Birthday. Not a holiday.
Monday, March 26	Mid-semester reports due at Registrar's Office at 9 a.m.
Saturday, March 31	Beginning of spring recess at close of classes.
Monday, April 9	End of spring recess at 8:30 a.m.
Thursday, April 19	Patriot's Day. Not a holiday.
Monday, May 14	Dissertations for the degree of Doctor of Philosophy due at Registrar's Office at 9 a.m.
Monday, May 21	Theses for degrees of Master of Arts and Master of Arts in Education due at Registrar's Office at 9 a.m.
Monday, May 21	No classes.
Tuesday, May 22	No classes.
Wednesday, May 23	Semester examinations begin.
Wednesday, May 30	Memorial Day. A holiday.
Sunday, June 10	Commencement Day.
Monday, September 17	Upperclass registration for 1962-63.

General Information

<i>President:</i>	Dr. Howard B. Jefferson
<i>Corporate Name:</i>	Trustees of Clark University
<i>Incorporation:</i>	1887
<i>Function:</i>	Independent university of liberal arts and business administration for men and women
<i>Degrees Conferred:</i>	Bachelor of Arts Bachelor of Science in Business Administration Bachelor of Science in General Studies Master of Arts Master of Arts in Education Doctor of Philosophy
<i>Enrollment:</i>	1145
<i>Faculty:</i>	79
<i>Endowment:</i>	Book Value: \$7,075,047 Market Value: \$9,780,767
<i>Library:</i>	230,000 volumes 50,000 maps and charts





The Seventy-Fifth Anniversary 1887-1962

During the academic year 1961-62, Clark University will celebrate its diamond anniversary. It was 75 years ago that the charter of the University was granted. At that time, Dr. G. Stanley Hall said of the newly-created graduate school, "It is the single and express desire that in whatever branches of sound learning it may engage, the new University may be a leader and a light." In the intervening years, Clark has fulfilled its first president's intentions. It has been the site of great discoveries, purposeful and rewarding research and dedicated teaching.

The observance of the 75th anniversary began on Sept. 29, 1961, with a formal convocation opening the year-long celebration. Other special programs and events will also be held throughout the year. For a brief time then, Clark will glory in its past, but largely with the reflection that the past provides a solid foundation for the achievement of its goals for the future.



History of the University

In February of each year, Clark University celebrates Founders' Day. This custom commemorates the beginning of the University chiefly through the efforts of two men, Jonas Gilman Clark, a sagacious merchant and businessman for whom the university is named, and Dr. Granville Stanley Hall, an educator of breadth and vision.

Mr. Clark, a native of Worcester environs, became wealthy during the California Gold Rush by supplying miners and others with manufactured goods. He increased his personal fortune through wise business dealings initiated after his return to the East at the end of the Civil War. He later returned to Worcester where he established a residence and became interested in civic affairs. It was during this period of his life that he decided to endow an institution of higher learning. His last years were largely devoted to the project. In this, he was assisted by his wife, Susan, and a group of prominent Worcester citizens, including George F. Hoar, a United States Senator from Massachusetts, and General Charles Devens.

In 1887, the Trustees of Clark University were incorporated. Construction started that year on a main building, known today as Jonas G. Clark Hall, and the Science Building. Dr. Hall was appointed the first president of the university. He had been a professor of philosophy, psychology, and education at The Johns Hopkins University and had already established his reputation as a vigorous and original scholar.

Recognizing the need for graduate institutions in the United States (there was at that time only one titled graduate school in the United States—The Johns Hopkins University), President Hall began the organization of an educational institution which would be solely concerned with graduate study and research. As a result, Clark University became the second graduate school established in the United States and for 13 years operated only as a graduate school.

This unusual educational idea attracted the attention of a number of brilliant and original scholars who, upon President Hall's urging, joined the Clark University faculty. They constituted one of the most outstanding communities of scholars this country had then seen. The first students entered the university in 1889 and its first graduates received diplomas in 1891. In 1900, Clark University was one of the 14 charter members of the Association of American Universities. The brilliance of both teachers and students soon established the scholarly reputation of the university.

While Mr. Clark supported President Hall's concept of graduate education, he was also interested in an undergraduate college for men and particularly those men who had limited financial resources. Accordingly, a codicil to his will, effective upon his death in 1900, provided for an undergraduate college with a three-year curriculum.

In compliance with the codicil, the trustees established Clark College. It was to have an administration and faculty distinct from those of the graduate school. Carroll Davidson Wright, then serving as the first United States Commissioner of Labor, was selected as the first president of Clark College. Rufus C. Bentley was named by the trustees as the first Dean of Clark College.

From its beginning, Clark College had an educational philosophy which was marked by seriousness of purpose and hard work. Inasmuch as the bachelor's degree was granted after three years of study, as opposed to the more common four-year curricula of the day, the student carried a heavy program of study. There were intramural contests rather than intercollegiate sports and extra-curricular activities were at a minimum. Though entrance requirements were informal, a high standard of performance was necessary to remain in college.

The educational program formulated for Clark College by President Wright and Dean Bentley complemented the already-established program of the graduate school. It was only a matter of time before the undergraduate college and



the graduate school, then associated but distinct, became one educational and administrative unit.

President Wright, who died in 1909, was succeeded by Edmund Clark Sanford, a professor of psychology in the graduate school. President Hall resigned in 1920 and President Sanford felt the time was ripe to unite the undergraduate college and graduate school. He resigned from the presidency to return to teaching and scholarship, leaving the field open for reorganization of the two entities under a single president. This the trustees decided to do and cast about for a man who would become the president of Clark University, which henceforth would include both the graduate and the undergraduate divisions.

In 1920, Walter Wallace Atwood, a professor of physiography at Harvard University, was selected by the trustees as president. During his tenure, there were significant changes in both the educational program and the physical plant. There was a reorganization of the graduate school and undergraduate college faculties and administrations into a single unit. The three-year curriculum leading to the bachelor of arts degree was increased to four years. The Graduate School of Geography was founded. Participation in intercollegiate activities, including athletics was encouraged. Additions to the physical plant included a men's dormitory, an athletic field, a gymnasium, a library tower and an auditorium. The latter was named Atwood Hall in honor of the president.

In 1941, the Division of Business Administration was established. Also, in 1941, Clark University became co-educational when the trustees voted to start the Women's College of the university. *Women first enrolled as undergraduates in September, 1942.*



President Atwood retired in 1946 after 26 years in office. His successor was Howard Bonar Jefferson, a professor of philosophy and Director of the School of Philosophy and Religion at Colgate University.

Under the vigorous leadership of Dr. Jefferson, the university has continued to take great strides. The undergraduate curriculum has been enriched by the addition of a Department of Philosophy and the introduction of a series of general education courses. In 1953, a chapter of Phi Beta Kappa, the national liberal arts honor society, was established at Clark University. Courses in mathematics leading to the master's degree were re-established.

In 1953, The Evening College of Clark University was organized as an institution for adult learning. It provides university education for adults and offers an opportunity for persons to earn a bachelor's degree exclusively by evening study. In addition, it frequently organizes non-credit courses, institutes and seminars as a community service.

In 1958, the Institute of Human Development was established as an adjunct of the Department of Psychology. A center of psychological study, its purpose is to develop an all-inclusive concept of human development.

During Dr. Jefferson's tenure, the university has almost doubled its physical plant. A new chemistry laboratory was opened in September, 1958. In the following year, two new dormitories and a student center were opened. The student center was named in honor of Dr. Jefferson. In addition, the university purchased a number of buildings for use as dormitories, faculty apartments and a conference center.

Today, one can receive instruction leading to the degree of Doctor of Philosophy in chemistry, economics, geography, history and international relations, and psychology. Master's degrees can be obtained in these fields and also in biology, education, government, mathematics, physics, and sociology. The undergraduate may take courses in these fields and, in addition, in business administration, classics, English, fine arts, geology, German, philosophy, and Romance languages.

Not content to maintain itself on its past reputation, the university has been busily engaged in planning for its future. Accordingly, a series of committees composed of faculty, alumni and prominent citizens of Worcester have been meeting since 1959 to develop goals for the university's future and to plan ways to achieve these goals. That the university has taken this step seems to indicate that it is not willing to grow, as "Topsy" grew, but that it wishes to plan for an orderly development using to the fullest its rich resources for original research and scholarly instruction.

Worcester and the University

When plans for the new university were taking shape in Mr. Clark's mind, he enlisted the aid of a group of far-sighted and influential Worcester citizens from whom, later, the majority of his original board of trustees was chosen. In this was set a pattern for cooperation between the university and the community which has persisted throughout the history of the institution.

The intellectual life of the city has been strengthened by the contributions of the faculty and of distinguished guests whom the university has brought to Worcester. Members of the staff have served local institutions both public and private in many ways, and the Clark Fine Arts series has helped to enrich the cultural life of Worcester.

The college has opened the door to higher education for hundreds to whom the opportunity would have been denied if they had been forced to seek it elsewhere. The Graduate School has aided more gifted students to proceed to the highest levels of intellectual endeavor. Particularly noteworthy has been the service to teachers in the public school system. Finally, the Evening College has greatly widened educational opportunities in the community.

In turn, the university has benefited by the support, both financial and intangible, which it has received from the citizens of Worcester. The interchange of services and ideas with the staffs of other Worcester institutions and the opportunity to use their libraries on a reciprocal basis have been invaluable.

There is particularly close cooperation between the Department of Fine Arts and the Worcester Art Museum, between the Department of History, Govern-

ment and International Relations and the American Antiquarian Society, between the Department of Chemistry and the Worcester Foundation for Experimental Biology, and between the Department of Psychology and the Worcester State Hospital. The Worcester Public Library and the Clark University Library cooperate by avoiding duplication in the coverage of certain subjects and by a corresponding widening of the coverage in the fields assigned to each.

The university is conscious that it is a part of the community and that, as such, it has both obligations and benefits. Its steadfast purpose is to strengthen the bonds of mutual interdependence and cooperation.

The Campus

UNIVERSITY CAMPUS

Clark is an urban institution situated close to the heart of Worcester. Its educational and administrative activities are located on a compact campus near a major city park and city transportation lines. On adjacent properties facing the campus are University dormitories, apartments, infirmary and the residences of the President and Dean of Students. Clay tennis courts and a running track are nearby as well as a larger athletic field, used for soccer and baseball. A number of other University residences and centers are located near campus. In addition, the University owns a tract of nearly 20 acres, known as the Hadwen Arboretum, a few miles from campus. Nearby colleges include Worcester Polytechnic Institute, Assumption College and the College of the Holy Cross. The famed Worcester Art Museum is also located near by. The first building erected on the campus was Jonas G. Clark Hall, a four-story granite and brick structure in the center of the campus. It houses the offices of the Deans, Registrar, Bursar and Treasurer as well as those of the Evening College, Summer School, Placement Office and Psychological Clinic. In addition, it contains many of the offices and classrooms of the depart-

CLARK HALL





SCIENCE
BUILDING

JEPPSON
LABORATORY

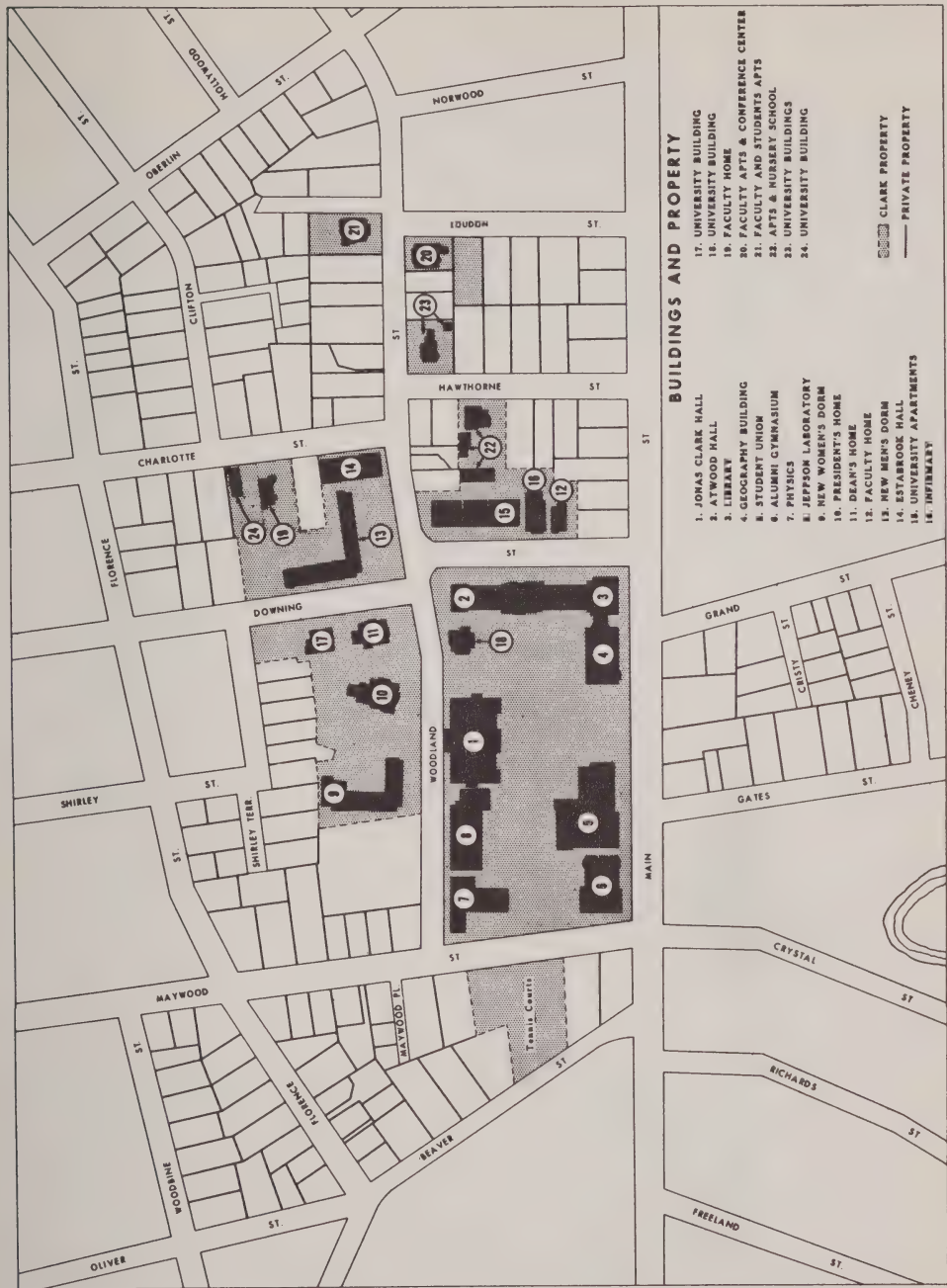
UNIVERSITY
LIBRARY

LIBRARY TOWER

ATWOOD HALL

ESTABROOK
HALL

ments of instruction, the Women's Gymnasium, Language Laboratory, and the Institute of Human Development—an adjunct of the Psychology Department. Clark's second oldest building is the Science Building, site of experimentation by Dr. Robert H. Goddard, "father of the space age," and Dr. Albert A. Michelson, America's first Nobel Prize winner. One wing of the building and a portion of its midsection has been remodeled recently to provide new research and instruction facilities for the Biology Department. The opposite wing of the same building also has undergone a less intensive remodeling for the Physics Department. Between these two oldest Clark buildings is one of its newest—Jeppson Laboratory. Completed in 1958, this building has completely modern research and instruction facilities for the Chemistry Department. It contains Johnson Hall, a multipurpose lecture hall seating 174 persons, and Kraus Library, specializing in chemical periodicals. Standing at the opposite corner of the main campus is the University Library, which, besides its large book collection, has one of the most extensive geographical map and chart collections in the United States. The building also has a music room and language center with appropriate records and literature. Attached to the north end of the University Library is the Library Tower, built in 1939 to provide space for the growing library collection. An elevator offers access to eight levels of stacks in the tower. The lower portion of the tower contains the stage of Atwood Hall, an 800-seat auditorium used for student assemblies, lectures, concerts and other University functions. Atwood Hall also contains the Blue Room for smaller lectures and meetings, and the offices and classrooms of the Fine Arts and Music Departments. The latter is soon to move into remodeled facilities in Estabrook Hall which will contain practice and seminar rooms as well as offices of instruction for the Music Department. Estabrook Hall



MEN'S
DORMITORY

WOMEN'S
DORMITORY
ALUMNI
GYMNASIUM

JEFFERSON
HALL

UNIVERSITY
APARTMENTS

CONFERENCE
CENTER

GRADUATE
HOUSE

also has dormitory rooms for male students and offices for student organizations. Most male students living on campus are quartered in the recently-constructed Men's Dormitory. Completed in 1959, this fire-proof dormitory has rooms for 201 men with formal lounges and recreation room for their leisure time. The Women's Dormitory, also completed in 1959, is similar in design to the Men's Dormitory. It houses 137 women students and also has formal lounges and recreation rooms. The Alumni Gymnasium, one of Clark's pre-war buildings, possesses a gymnasium seating 800 persons and shower and locker facilities for intramural and intercollegiate athletics. The offices of the Department of Physical Education are there. On the second floor is the Alumni Office and an Alumni Lounge, a comfortable meeting room for university organizations. Another newly-constructed building is the Student Center—Jefferson Hall. Opened in 1959, Jefferson Hall contains the University Dining Hall and snack bar, faculty and student lounges, a recreation room, student mail boxes and the University Bookstore. Another dormitory unit is the University Apartments, purchased in 1959. Two-thirds of the building is used for women undergraduates while the remaining section contains apartments for married faculty and staff members. Near the main campus is the Conference Center, originally the site of the Institute of Liberal Studies for Executives but now used for university meetings and functions. The University has recently purchased a large private home and is converting it into a Graduate House, a dormitory for graduate students. This will contain living quarters for graduate students as well as a comfortable lounge and kitchen facilities. A number of other private homes near the campus have been purchased in recent years to provide housing for married graduate students and faculty members.





The Library

Tilton M. Barron, *Librarian*

Marion Henderson, *Reference Librarian*

Elizabeth Hassinger, *Catalog Librarian*

Valerie Lein, *Circulation Librarian*

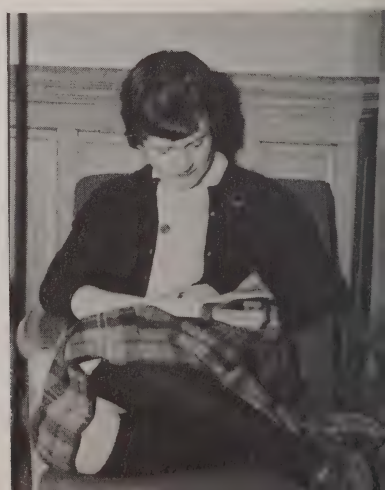


The Clark University Library contains over 230,000 volumes and some 50,000 maps and charts. The major part of the collection is centrally housed, and an open shelf system fosters free access to books and periodicals for student and scholar. Chemistry periodicals are available for reference at the Kraus Library—Jeppson Laboratory. To stimulate reading skill and to acquaint the student with the contemporary culture of foreign lands, a collection of foreign newspapers and periodicals is maintained in a Language Center, an adjunct to the modern electronic language laboratory.

The collection reflects the history and growth of the university. The combined scholar's library of the early graduate school and the undergraduate library of Clark College have been developed through the years to serve the academic needs of Clark University. The richest holdings are in the fields in which graduate work is offered—geography, psychology, biology, chemistry, physics, mathematics, economics, and history and international relations. More characteristically undergraduate in content are the collections dealing with music, fine arts, language, literature, religion, and philosophy. The Library pays particular attention to major bibliographical and reference tools, and currently receives over 1000 periodicals.

A music library of recordings contains a collection of classical and standard musical works. There is also a listening room in the building.

The Clark University Library coordinates its acquisition of new material, and exchanges material, with other libraries in the Worcester area.





THE UNDERGRADUATE COLLEGES



CLARK
COLLEGE

The Men's College and the Women's College constitute the primary undergraduate divisions of the University. Educationally they operate as a unit, and admission and degree requirements are identical in the two colleges. Both offer academic programs in the liberal arts and in business administration.

LIBERAL ARTS

The liberal arts program provides for breadth of knowledge and understanding together with the intellectual discipline resulting from concentration in a selected field of special interest. The program, leading to the degree of Bachelor of Arts, possesses a large degree of flexibility permitting adaptation to a wide variety of individual interests.

BUSINESS
ADMINISTRATION

Fundamental skills as well as broad professional training are offered through the business administration program. Breadth is assured by prescribing required courses in basic subjects and selected functional areas of business activity. Professional specialization is assured by requiring the student to select an area of concentration. Cultural background is available to the student by allowing him to freely elect part of his program from courses in the arts and sciences. The areas of concentration are accounting, economics, finance, marketing, management and personnel administration. The program leads to the degree of Bachelor of Science in Business Administration.



Admission

ADMISSION Clark University welcomes applications for admission from young men and women of intellectual ability and seriousness of purpose. The selection is on a competitive basis and all applicants are subject to final approval of the Admissions Committee.

**CLASSIFICATION
OF STUDENTS** The university accepts four classes of students:

Undergraduates: Candidates for the degree of Bachelor of Arts and Bachelor of Science in Business Administration in the undergraduate colleges.

Graduate Students: Candidates for the degree of Master of Arts, Master of Arts in Education or Doctor of Philosophy. For further information, see the section, entitled "Graduate School."

Special Students: Persons, not prospective degree candidates, who wish to take advantage of the opportunities for study provided by the university and who give satisfactory evidence of adequate preparation for the work which they wish to undertake.

Summer School and Evening College Students: Persons who may wish to be candidates for a degree or who may wish to take advantage of the opportunities for study provided by the Summer School or The Evening College.

Auditors: In addition to the above four classes of students, auditors, registered for attendance but not for credit, may be admitted at the discretion of the administrative officers of the University. They pay the regular tuition rates but are not enrolled as students and do not pay the matriculation fee.

WITHDRAWAL The University reserves the right to require the withdrawal at any time of any student or auditor whose record in either conduct or scholarship fails to meet the expectations implied by his admission.

APPLICATIONS Applications to the College should be prepared carefully and must be accompanied by the applicant's scholastic record and a

non-returnable application fee in order that the application receive consideration. Formal application should be made at the earliest possible date during the applicant's final year in secondary school.

REQUIREMENTS The completion of a four-year high school program or its equivalent, including 16 acceptable units of credit, is normally required for admission to the freshman class. The term "unit" means a course of study in one subject taken through a school year. An applicant must furnish official records from all preparatory schools attended.

Subject-Matter Requirements: The subject-matter requirements for admission to the freshman class are as follows:

Required Subjects, 8 units	
English	4 units
Mathematics (algebra and geometry)	2 units
(Applicants expecting to specialize in science are advised to present at least three units of mathematics.)	
Foreign Language (in one language)	2 units
(Normally required)	
Restricted Electives, 5 or more units in addition to the 8 units of required subjects	
Mathematics	1 or 2 units
Foreign Language	1 to 4 units
(A single "beginning unit" in a foreign language is not acceptable.)	
Social Studies	1 to 3 units
(history, government, civics, etc.)	
Natural Sciences	1 to 3 units
(physics, chemistry, etc.)	
Free Electives, not more than 4 units	
Subjects recognized by the applicant's preparatory school in its regular program, at the discretion of the Admissions Committee.	

College Entrance Examination Board: All applicants must take the Scholastic Aptitude Test of the College Entrance Examination Board. This test may be taken in December, January or March of the applicant's senior year in secondary school. In addition, applicants are required to submit a writing sample taken under controlled conditions. This requirement may be met by participation in the College Entrance Examination Board's De-

cember, January or March administration of such a controlled writing sample. Applicants are also required to take the Achievement Tests of the College Entrance Examination Board in Mathematics and Foreign Languages in March of the applicant's senior year.

A bulletin of information concerning these examinations may be obtained from the College Entrance Examination Board. In the East, write to Post Office Box 592, Princeton, N.J.; in the Far West, write to Post Office Box 9896, Los Feliz Station, Los Angeles 27, Cal.

Scholastic Quality Requirements: In addition to the Scholastic Aptitude Test of the College Entrance Examination Board, certification by the principal of the student's secondary school in at least 14 of the 16 required units is normally necessary for admission without achievement examinations. An exception may be made if the applicant ranks in the upper quarter of the class with which he graduated.

ADMISSION
WITH
ADVANCED
STANDING

An applicant for admission who has attended another institution of college grade is required to submit a letter of honorable dismissal, a complete transcript of his academic record at the institution last attended, his high school transcript and such other information as the Admissions Committee may request. No application can be considered for admission until all transcripts have been received. Tentative evaluation of credits for courses of college grade completed elsewhere will be made at the time of a student's first registration at Clark and will be used in planning his course program and in classifying him provisionally as a freshman, sophomore, junior or senior.

Students admitted with transfer credits will be regarded as on probation during their first semester. Definite recording of the credit tentatively evaluated will be made only if (a) a satisfactory semester record—no more than one D in a four- or five-course program—is attained in the first or second semester of residence; and (b) the records of the student's first two semesters are both non-probationary. When a transcript has been accepted by the student concerned, no further revision of the amount of credit will be considered.



Transfer students in the business administration program should note that (1) Business English and Business Mathematics are not accepted for credit toward the degree; (2) the University reserves the right to examine a student in any course required for the degree which is offered for transfer credit; (3) a maximum of two year-courses in one area of concentration may be accepted for transfer credit without further confirmation, and more than two courses in one area will not be accepted for transfer credit until a confirming course at a higher level has been completed at Clark with a grade of C-minus or better; (4) in no case, will transfer credit be allowed for more than four courses in any one area; and (5) in any subject in which a full year-course is required at Clark, the University may deny the transfer of credit for a half-year course in that subject.

A graduate of the three-year course of the School of the Worcester Art Museum may be admitted as a candidate for the degree of Bachelor of Arts with the rank of junior in the college. In such cases the usual admission requirements must be met and the general subject-matter requirements for the degree must be satisfied.

ADMISSION
DEPOSIT

When a student's application is complete and he has been tendered formal admission to Clark University, he will be required to indicate his acceptance of the offer of admission by making an admission deposit to hold a place for the student in the incoming class. This deposit is credited toward the charges for the first semester. The deposit is forfeited in case the student does not enroll for the specified semester. This applies to all students except graduate and special students. The deposit may also be used to reserve dormitory space.

ADMISSION
OF SPECIAL
STUDENTS

Applicants for admission as special students should address their inquiries to the Dean of Students (men) or Dean of Women and they should be prepared to supply evidence of qualification for the study they wish to undertake.

ADMISSION
OF FOREIGN
STUDENTS

Application from foreign students will not be considered if received after May 1. Foreign students whose native tongue is not English must be able to satisfy the university requirements for proficiency in the English language. Every foreign student must have medical insurance, preferably that of the Institute of International Education.

The Academic Programs

GROUPS

Course credit may be obtained at the undergraduate level in the following fields of instruction which, for administrative purposes, are known as "groups."

Group A. Science and Mathematics: Biology, chemistry, experimental psychology, geology, mathematics and physics.

Group B. Social Sciences: Economics, education, geography, government, history, international relations, philosophy, psychology and sociology.

Group C. Language and Literature: Greek, Latin, English, French, German, Spanish and an interdepartmental course in language and literature.

Group D. Fine Arts: Art and music.

MAJORS

A student may major in biology, business administration, chemistry, classics, economics, English, geography, German, government, history, mathematics, philosophy, physics, psychology, sociology or Romance languages. Interdepartmental majors are offered in international relations and American civilization. A major in fine arts is offered through a program given in cooperation by Clark and the School of the Worcester Art Museum. Courses but not majors are offered in education, geology and music.

STUDENT
PROGRAMS

The undergraduate normally carries a program of five courses throughout the academic year. In addition, he must meet the requirement for physical education. In general, a course meets three times weekly. Laboratory periods are usually three hours long. Students should consult their faculty adviser or major department when questions of course or program selection arise.

INDUCTION

Freshmen must attend an induction program held several days before the academic year begins. After meeting initially at the University, freshmen usually spend the remainder of the induction program at a camp or hotel. In recent years, the men have been undertaking the induction program at Camp Union, Greenfield, N. H.; the women at Castle Hill, Ipswich, Mass.

During the induction program, freshmen have an opportunity to become acquainted with their classmates as well as members of the University faculty and staff. They will also meet upperclassmen and alumni. Placement examinations and other tests will be given. Freshmen will attend individual and group conferences and will register for a program of studies.



A modified induction program is held for transfer students entering the upper classes. These students do not attend the induction programs held off-campus but they do report early to the University for testing, orientation and registration.

**FACULTY
ADVISERS**

A freshman is assigned a faculty member who advises the student on a program of courses and on other matters. After the freshman year, students are encouraged to select an adviser of their own choosing. A change of advisers may be made on formal request addressed to the appropriate dean.

The adviser assists the student in choosing his program of studies and is usually available for consultation on any matter which the student may wish to discuss with him.

REGISTRATION

Each student is required to register for a detailed program of courses at the beginning of every semester. The student will be given notice in advance of the dates on which registration is required. Failure to register within the announced period is penalized by a late registration fee.

Changes in registration may be made, with the approval of the student's adviser, for a limited time after the end of the registration period. Later changes involve a formal petition to the College Board.





FRESHMAN PROGRAM

A freshman must choose his entire program from courses which are open to freshmen. All freshmen are required to take English 11, a Group A course, a Group B course and an elective. Candidates for the B.A. degree must also take a course in a foreign language. Candidates for the B.S. in B.A. degree must take B.A. 100, *Principles of Accounting*.

Students who expect to major in Group A and students who are candidates for the B.S. in B.A. degree must elect Mathematics 11.

Students especially qualified by preparation, performance and interest may elect a second laboratory science in place of a Group B course.

ADVANCED PLACEMENT

Placement in advanced courses is determined by individual performance on special departmental placement examinations or, in some instances, on the Advanced Placement and Achievement Tests of the College Entrance Examination Board. College credit for certain courses completed in high school may also be granted toward the B.A. degree on the basis of the College Entrance Examination Board Advanced Placement Tests.

**SOPHOMORE
PROGRAMS**

A sophomore must give priority in his program to any general degree requirements which remain to be satisfied and should provide for an introduction to the field or subject in which a major is chosen. The remaining elective choices provide the student opportunity to broaden the range of his interests.

Selection of a major is required of B.A. degree candidates at the time of registration for the sophomore year. Candidates for the B.S. in B.A. degree must select an area of concentration at the same time.

Sophomores may elect any course designated by a number beginning with the numeral 1, indicating the course is primarily for undergraduates. They are not admitted to courses designated by a number beginning with the numeral 2, except under unusual circumstances.

**JUNIOR-SENIOR
PROGRAMS**

Juniors and seniors should plan their courses carefully and in consultation with their faculty advisers. However, these students may elect any courses designated by numbers beginning with 1 or 2, indicating courses which are primarily for undergraduates or for advanced undergraduates and graduate students. The selection by juniors and seniors of these courses is subject to any conditions stated in the course description.

Under special conditions and with the approval of the College Board and the Secretary of the Graduate Board in each case, seniors who rank in the upper third of their class may be admitted to courses designated by numbers beginning with the numeral 3, indicating courses which are primarily for graduate students.

**ACCELERATED
PROGRAMS**

At least three years of college study in residence is required for a bachelor's degree. A student may earn the degree in this minimum time, or in three and one-half years, provided he is prepared to make the additional effort which is required and is able to maintain the required level of scholarship.

Such accelerated programs are possible through a combination of six-course programs during the regular academic year and attendance at summer schools. Credit toward a degree for study at a summer school is granted only when it is officially recognized in advance in each individual case.



To complete the bachelor's degree requirements in three years, the student must carry a six-course program through all three years and attend two six-week summer schools. Only students of exceptional ability and in excellent physical health are advised to undertake such a program.

To complete the bachelor's degree requirements in three and one-half years, the student must accumulate in that time credit for two and one-half courses in addition to a regular program. The student can accomplish this without attending summer school if he carries a six-course program through two and one-half years. More commonly, the student will accomplish this by attending two summer schools and carrying a six-course program for one semester or by attending three summer schools.

SIX-COURSE PROGRAMS

A student whose average grade for any semester is C+ or better can register for a program of six courses for the following semester.

A senior whose graduation within the academic year depends on the completion of a six-course program during that year may register for a six-course program if his average grade for the preceding semester is C- or better.

The tuition charges for a six-course program differ from the tuition charges for a normal program. See the section listing tuition and other charges.



WASHINGTON
SEMESTER
PROGRAM

Clark participates in the Washington Semester program of the American University in Washington, D. C. Under the program, a small number of superior students may be nominated to attend the program, usually in the junior year, studying United States government in the nation's capital. Though any student may be interested in the program, the opportunity should be particularly attractive to students majoring in government, international relations, history, economics or sociology. Full credit is given for the program toward the degree at Clark. Inquiry and application should be made to the Dean of the College.

JUNIOR YEAR
ABROAD

In cooperation with such organizations as Academic Year Abroad, Institute of European Studies and Scandinavian Seminar, Clark offers its students the opportunity of spending their junior year abroad. Programs of foreign study involving academic credit must have prior approval of the College Board.

PARTIAL
PROGRAMS

Under special circumstances, programs of fewer than five courses may be permitted. A student whose program is fewer than four courses is designated as a part-time student. Part-time students are excused from the requirement in physical education and are not required to attend student assemblies. Tuition charges for the program of a part-time student differ from tuition charges for a normal program. See the section listing tuition and other charges.

SPECIAL
STUDENTS

Special students register for such programs as they agree upon in consultation with the instructors concerned. They are not required to attend the student assemblies and they are excused from the requirement in physical education. Tuition charges are based on a "per course" rate. See the section listing tuition and other charges.

PRE-
PROFESSIONAL
PROGRAMS

One function of the undergraduate colleges is to prepare students who intend to enter a professional school or take graduate study. Students entering Clark may gain this basic preparation through the selection of the appropriate major. A student planning a professional career should consult with his adviser as early as possible in his college career to best shape an undergraduate program.

Pre-medical, pre-dental or pre-nursing students can satisfy pre-professional requirements for entrance into a medical, dental or nursing school through a biology major or chemistry major, each of which will provide the student with the necessary basic courses. In the case of teaching, Clark offers courses necessary for state certification. It also offers a graduate program in education. For information concerning teaching requirements, consult the Education Department section under the listing of "Departments and Courses."

Pre-law students are not limited to the selection of a particular major or a fixed group of studies. Some attention to the social sciences is generally favored but not mandatory. Undergraduates headed for law schools are advised to seek a broad liberal arts education. Frederick W. Killian, associate professor of sociology and a lawyer, serves as Clark's adviser to students planning to attend law schools and is available for consultation concerning law schools, scholarships and undergraduate programs.

Requirements for a Bachelor's Degree

GENERAL
REQUIREMENTS

A student in good standing who completes the requirements for either the degree of Bachelor of Arts or the degree of Bachelor of Science in Business Administration will be recommended for the appropriate degree unless, in the judgment of the College Board, there is cause for withholding the recommendation.

Residence: A student must be in residence at least three academic years. At least one full year, usually the last year before the degree is conferred, must be spent at the University. Five one-year courses must be satisfactorily completed for each year in residence.

Course Requirements: All college regulations concerned with credit toward a degree are expressed in terms of courses. A course as a unit of credit normally implies three or four class meetings or laboratory exercises per week throughout two semesters and constitutes one-fifth of a student's normal program. If fractional courses are offered, these will be combined in computing total course credits.

Undergraduates admitted to courses primarily designed for graduate students and designated by numbers beginning with the numeral 3 receive one-half course credit per semester irrespective of the number of weekly class meetings. Twenty full courses at a satisfactory level of scholarship are required for graduation.

Physical Education: A student must complete two years of physical education, two hours per week.

Assembly: A student is required to attend the regular student assemblies.

SPECIAL
REQUIREMENTS

In addition to the general requirements for a bachelor's degree, there are specific requirements for the degree of Bachelor of Arts and for the degree of Bachelor of Science in Business Administration.

SPECIAL
REQUIREMENTS
BACHELOR
OF ARTS

Major: A departmental major consists of seven courses designated by the department for this purpose. Four or five of these must be courses in the major subject; the remaining courses must be in fields of study closely related to the major subject. A grade of higher than C— is required in at least 11 semester grades involved in the completion of an acceptable major.

Mathematics 11 is a freshman year requirement for all students intending to major in Group A—Science and Mathematics.

Mathematics 11 may, with the major department's approval, be included in the seven courses constituting the major.

Students majoring in Group C—Language and Literature—who have not offered at least two units of Greek or Latin for admission are required to take a year's course in either classical civilization or elementary Greek or Latin. The course satisfying this requirement may, with the approval of the major department, be included in the seven courses constituting a major. The student's choice of classical civilization or Greek or Latin is subject to the approval of the major department. If a language course is chosen, this requirement should normally be satisfied during the freshman year.

Interdepartmental Major: An interdepartmental major includes eight or more courses chosen with regard to related content and purposes in fields which cross departmental boundaries. Two such programs are now available. These will be found fully outlined in the catalog section on "Departments and Courses."

Group A—Science and Mathematics: The student must take two courses, one in each of two different fields. The two courses may not be distributed between more than two fields of study. One of them must be a laboratory science. Courses in the history of the sciences are not counted toward the fulfillment of this requirement.

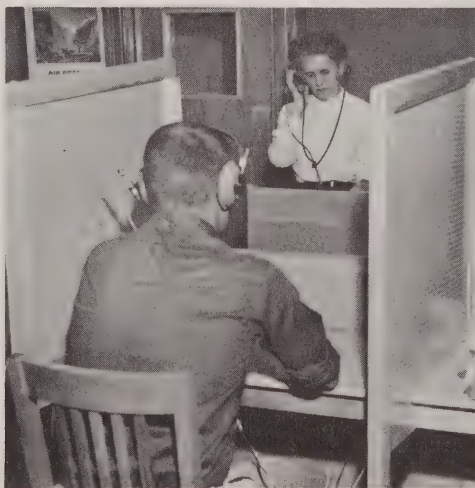


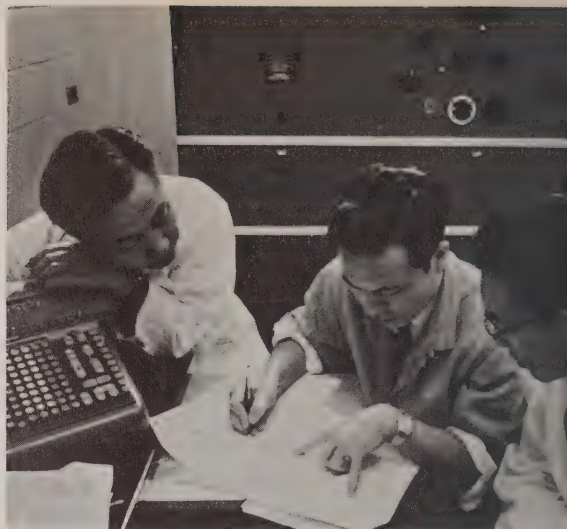
Group B—Social Science: The student must take two courses, one in each of two different fields. The two courses may not be distributed between more than two fields of study.

Foreign Language: The student must take a course in a foreign language at or beyond the third-year college level. However, freshmen whose placement tests show them ready for such a third-year course may fulfill this requirement by taking two years of a second foreign language. Language study must begin in the freshman year. A student whose previous education has been in a language other than English may be relieved of the foreign language requirement upon the successful completion of the freshman English course.

English: The English requirement includes one and one-half courses, English 11 in the freshman year and an additional half-course. All students are required to maintain satisfactory proficiency in English.

Fine Arts: A half-course in fine arts or music or a year-course in a foreign civilization must be completed.





SPECIAL
REQUIREMENTS

BACHELOR
OF SCIENCE

IN BUSINESS

ADMINISTRATION

Mathematics: One course in mathematics is required.

Laboratory Science: One course in a laboratory science is required.

English: Two courses are required in English of which a half-course may be Public Speaking.

Sociology, Psychology or Government: Three courses are required in not more than two fields.

Economics: One and one-half course in economics is required.

Business Courses: Requirements include one course in accounting, one-half course in marketing, one-half course in management, one course in statistics, one-half course in Corporation Finance, and one course in Analysis of Business Problems.

Concentration: In the fields of accounting, economics and finance, management or marketing; in addition to the courses already required, the student's program shall include no less than two or more than three courses in any one field, except that the total courses in any one field shall not be less than three. For this purpose, no more than two half-courses with a grade of less than C- are acceptable.



Elective Courses: One and one-half of the remaining courses must be in the liberal arts (non-business) area.

The special requirements listed here for the degree of Bachelor of Science in Business Administration are binding upon the class entering in September, 1961. Students currently enrolled in the program or those entering with advanced standing should consult their adviser or the director of the division regarding the requirements to be met by them.

Academic Regulations

GRADES

Grades are reported for each student at the end of each semester. The grades are A—excellent; B—good; C—average; D—poor; and F—failure. The modifying symbols, plus and minus, are used with each of these letter grades, except F, giving 12 levels of passing grades. A report of incomplete is permitted only when sickness or some other unavoidable circumstance prevents the completion of a course.

A record of failure in a course is final and not subject to change on the basis of any subsequent performance of the student who is involved. Credit for a course in which a failure has been reported may be secured only by repeating the course and earning a passing grade. A record of incomplete incurred in the first semester must be made up by the end of the academic year;

if incurred in the second semester or summer term, it must be made up by midsemester of the following fall. If a course is not completed within the specified time, the record of incomplete is changed to one of failure.

SCHOLARSHIP STANDARDS	Courses with the grades of D+, D, or D- may not be counted toward a bachelor's degree beyond one-quarter of the total credit required, i.e., not more than five such courses or their equivalent in fractional courses may be counted. In consideration of this regulation only grades received and credit earned at Clark are considered.
CLASSIFICATION OF STUDENTS	A student continues to be listed in the class with which he entered college until the end of the third, or junior, year. At this time only those students who have credit for at least 14 courses with a minimum of 18 semester grades of C- or better are promoted to the senior class.
PROBATION	Students with unsatisfactory grades are placed on probation. Failure of a student to remove himself from probation after two consecutive terms or three non-consecutive terms normally results in separation from college.
EXAMINATIONS	Final examinations are regularly given at the end of each semester in all college courses. Approximately two weeks are set aside for each examination period and an attempt is made to distribute the examinations for any individual student throughout this period. Absence from a final examination, except for the most compelling reasons, usually results in a record of failure in the course. Other examinations and tests may be given at any time during the semester at the convenience of the instructors.
ATTENDANCE	<p>Students are expected to be present on the first day of each term and to continue in attendance from day to day until the end of the term. Students are expected to be consistently regular in attendance.</p> <p>Attendance at a regularly-scheduled student assembly is required except by part-time and special students.</p>

Honors, Awards and Prizes

ANNUAL HONORS First honors or second honors are awarded at the end of each year to members of the freshman, sophomore and junior classes who have, in the judgment of the College Board, distinguished themselves by their scholarship during the year.

COURSE HONORS The bachelor's degree may be awarded *cum laude*, *magna cum laude* and *summa cum laude* to members of each graduating class whose records, in the judgment of the College Board, warrant this distinction.

DEPARTMENTAL HONORS A student may elect a program leading to a bachelor's degree with honors in a particular subject at the beginning of the junior year and, in some cases, at the beginning of the senior year. The opportunity is open to both B.A. degree and B.S. in B.A. degree candidates. Under this plan, the department appoints an honors adviser who assists the student in working out a unified program of courses for the junior and/or senior years. The program may include a maximum of two honors courses in which the student works with a large measure of independence under the supervision of the adviser. In the senior year, the student must satisfactorily pass a comprehensive examination given by the department.

Students may apply in writing to their major department for permission to take honors work, not later than May 1 in the sophomore year or, in some departments, in the junior year. Department approval is necessary for admission to such work. In exceptional cases and in certain departments, application may be made and admission approved by the department concerned as late as the first two weeks of the senior year but only with consent of the College Board.

Admission to an honors program does not relieve the student from any of the standing regulations. A student's candidacy for honors will be terminated at the end of any semester in which he has not maintained a standard satisfactory to the department in which he is doing honors work. If candidacy is terminated for any reason, the amount of credit to be allowed for honors courses will be determined by the College Board in consultation with the major department.

The department may recommend the student's graduation with honors, high honors or highest honors, the recommendation to occur at the conclusion of the honors program. Only students meeting the standards of the College Board for the degree *cum laude* may receive departmental recommendation for high or highest honors.

PHI BETA
KAPPA

The Society of Phi Beta Kappa, founded at the College of William and Mary in 1776, is dedicated to the recognition and encouragement of outstanding scholarly achievement in liberal studies. The Clark chapter, Lambda of Massachusetts, was established in 1953. Each year, a limited number of juniors and seniors are elected to membership on the basis of distinction in scholarship in programs which have been definitely liberal in character.

OTHER
HONORARY
SOCIETIES

Psi Chi: National Honorary Society in Psychology.
Gamma Theta Upsilon: National Geographical fraternity.
Delta Phi Alpha: National Honorary German fraternity.

PRIZES AND
AWARDS

Homer Payson Little Award in Geology: Provided by a group of interested alumni, the award is presented each Spring to that student who has achieved the highest record in geology classes during the year. The award is named in honor of Dr. Little, a professor of geology at Clark from 1922 until 1954 and also Dean of Clark College.

Prentiss Cheney Hoyt Poetry Prize: A prize of \$20 is awarded annually by the English Department for the best poem by an undergraduate. The prize money is received from a fund established by alumni as a memorial to Dr. Hoyt, a professor of English at Clark from 1909 to 1920.

Loring Holmes Dodd Drama Contest: A prize of \$35 is awarded by the English Department to the student writing the best one-act play. Dr. Dodd was professor of English at Clark from 1910 to 1949 and was chairman of that department.

Physics Achievement Award: Each year, the student in Physics 11 who, in the opinion of the instructor, shows the best performance and improvement in the course work is given a copy of the

Handbook of Chemistry and Physics, made available by the Chemical Rubber Publishing Company.

Ahepa Greek Prize: A prize of \$25 is awarded each year to the best student in Elementary Greek. The prize is made available by the Worcester chapter, Order of Ahepa.

Tuition and Other Charges

GENERAL INFORMATION

Tuition, fees and other charges are listed below. Certain special fees may be required of students in certain departments. Charges for the Evening College and the Summer School can be found in their respective catalogs.

Tuition, board, dormitory rent and certain fees are due and payable ten days prior to the opening of each semester. No one is permitted to register for any semester until financial obligations have been satisfactorily arranged. Veterans relying on government aid should have enough resources to meet the initial payments because the first government checks are often delayed. A penalty fee is levied for late registration or for late payment of charges.

TUITION

Tuition is based on a normal program of five courses. Students who enroll for more or less than the normal program pay on a "per course" basis, one-fifth the full tuition.

Refund: If a student withdraws during the first week of any semester, he is allowed a refund of 80 per cent on tuition; second week—60 per cent; third week—40 per cent; fourth week—20 per cent; and after the fourth week—no refund.



BOARD	All undergraduates not living at home are required to eat at the Dining Hall.
DORMITORY DEPOSIT	The dormitory deposit is required to reserve a place in the dormitory.
DORMITORY RESIDENCE	Undergraduates not living at home or in a fraternity house must live in the dormitories.
STUDENT ACTIVITY FEE	The fee is required of all undergraduates including part-time but not special students.
INSURANCE	All students are expected to subscribe to the student insurance plan which gives year-round coverage for health and accidents.
APPLICATION FEE	This fee must accompany the application for admission to the undergraduate colleges. It is not returnable.
ADMISSION DEPOSIT	A fee is required of students when they accept the formal offer of admission.
KEY DEPOSITS	Fees may be required of the student by certain departments for entrance to buildings, laboratories or personal lockers.



TUITION	Full program	\$650.00 per semester
	Per course	\$130.00 per semester
BOARD		\$240.00 per semester
DORMITORY	Room rent (single)	\$200.00 per semester
CHARGES	Room rent (double)	\$150.00 per semester
ACTIVITY FEE		\$ 12.50 per semester
LABORATORY FEES	Physics, Biology, Geology, Psychology, Languages, and Chemistry II	\$ 15.00 per semester
	All other Chemistry courses	\$ 20.00 per semester
	Supplies and breakage:	
	Chemistry courses	\$ 10.00 per year
	Organic Chemistry only	\$ 20.00 per year
OTHER FEES	Application	\$ 10.00
	Matriculation	\$ 5.00
	Induction (Freshmen men)	\$ 25.00
	Induction (Freshmen women)	\$ 35.00
	Induction (Transfers)	\$ 10.00
	Diploma (Seniors)	\$ 5.00
	Insurance	\$ 25.00
	Late registration	\$ 5.00
	Late payment	\$ 5.00
GRADUATE SCHOOL FEES	Transcripts (no charge for first two)	\$ 1.00 each
	Diploma (master's degree)	\$ 5.00
	Publications (master's degree)	\$ 10.00
	Diploma (doctor's degree)	\$ 25.00
	Publications (doctor's degree)	\$ 30.00



Student Financial Aid

GENERAL INFORMATION

Scholarships and loans are provided by the University from endowed and unendowed funds. A limited amount of part-time employment is available in various offices and departments of the University. Other scholarships and loans are available from varying sources in communities throughout the United States.

SCHOLARSHIPS

Scholarships are awarded on the basis of ability, financial need and character. They vary in amount and some are restricted to definite localities or to particular subjects.

To be eligible for a scholarship, an entering freshman should have a scholastic record which places him in the upper third of his secondary school class. A college student is eligible if he has secured a rank in the upper half of his class for the preceding semester.

Scholarships are awarded at the beginning of each semester. Ordinarily an award for the first semester is continued through the second semester if the holder maintains a satisfactory scholastic record.

Applications for undergraduate scholarships should be filed at an early date on forms which may be secured from the College Financial Aid Officer of the University.

Incoming freshmen applying for scholarship aid do so through the College Scholarship Service, Box 176, Princeton, N. J. or, for the Far West, Box 27896, Los Angeles 27, Cal. The service provides the University with an independent analysis of the applicant's financial needs. Application forms may be obtained at the student's secondary school or from the College Financial Aid Officer of the University.

LOANS

Students who find it necessary to borrow money to continue their education may do so through various sources. Clark maintains its own loan funds which are of the short-term variety with interest bearing immediately upon receipt of the loan.

The National Defense Act Student Loan Program provides funds for long-term loans which bear no interest until a student has completed full-time study. Normally a person borrowing from these funds will repay the amount over a ten-year period. Graduates who enter public school teaching at the elementary or sec-

ondary level are eligible to have up to 50 per cent of their loan excused if they remain in teaching for a five-year period.

Other loan sources are also available and should be considered carefully by the applicant. In most cases, information about these loans is available through an applicant's high school.

Applications for Clark University loans or for National Defense Loans are available from the Financial Aid Office of the University.

SCHOLARSHIP
FUNDS

The following scholarships are currently available from University funds:

The Ellis-Hubley Competitive Scholarships: These are competitive scholarships restricted to male residents of Worcester or neighboring towns who have graduated from secondary schools in those areas. The scholarship accords full tuition plus a stipend and is awarded annually to the beneficiary from the income of funds bequeathed in memory of Gordon A. Hubley, Clark '10, and of Theodore T. and Gary G. Ellis.

One appointment is made each year to a member of the freshman class and the award is normally continued throughout the four years of the college course. Up to five other full tuition scholarships are awarded annually to applicants who, in the judgment of the Scholarship Committee, stand next below the successful applicant. A candidate must receive the recommendation of the principal or headmaster of his secondary school.

The Charles T. Bumer Memorial Scholarships: Up to six full tuition scholarships are awarded annually to entering freshmen who reside outside of Worcester County. These scholarships are granted to outstanding freshman applicants and are named in honor of the late Dr. Bumer, a professor of mathematics at Clark from 1948 to 1960 and chairman of that department.

The Jonas G. Clark Scholarships: These scholarships have been established by the trustees to provide financial aid for undergraduate students.

The Theodore T. and Mary G. Ellis Scholarships: These scholarships provide financial aid for male or female residents of Worcester and Worcester County.

The Whitman Scholarship: Named in honor of Ernest R. Whitman, long-time athletic director at Clark, this scholarship offers

full tuition plus a yearly stipend and is awarded to students, usually men, whose qualities of leadership in classroom and campus merit such an award.

The Sanford Memorial Scholarship: Established by alumni in honor of Edmund C. Sanford, president of Clark College from 1909 to 1920, the fund provides an annual scholarship for a male senior undergraduate.

The Livermore and Ambulance Scholarship: The endowment for this scholarship was provided by citizens of Worcester in honor of Charles Randall Livermore, first Clark man to fall in battle in World War I, and of his companions in the Clark Unit of Ambulance Drivers. The scholarship is for male students who are residents of Worcester County.

The Henry A. Willis Scholarships: Male students from Fitchburg, Mass., and vicinity have first consideration in the award of these scholarships. In the absence of suitable candidates from this community, grants may be made to others.

The Helen Brewster Randolph Memorial Scholarship: Established by the late Professor Charles B. Randolph in memory of his mother, the fund provides scholarships restricted to male college students.

The Charles B. Randolph Fund: The fund is restricted to male students, preferably those whose major is a foreign language.

The Alice Friend Newton Memorial Scholarship: This scholarship provides full tuition for an upperclass student in the Women's College whose major is psychology.

The William Richardson Scholarship: This scholarship was established by a bequest of Carlton E. Richardson, Clark '08 as a memorial to his father. The income of this fund is available preferably for male students of the Protestant faith.

The Jennie L. Richardson Scholarship: This scholarship was established by a bequest of Carlton E. Richardson, Clark '08, as a memorial to his mother. The income of this fund is available for female students of the Protestant faith.

The B'nai B'rith Scholarship: The Worcester Chapter, Order of B'nai B'rith, provides a scholarship primarily but not exclusively for the aid of Jewish students.

The Clark University Faculty Women's Club Scholarships: These scholarships are available to undergraduate students, either men or women, who rank high in intellectual and personal qualities.

The Aaron Fuchs Memorial Scholarship Fund: Given by Mrs. Celia Fuchs in memory of her husband and in honor of her sons, Lawrence, Clark '44, and Jerome, Clark '53, provides scholarship aid for non-residents of Worcester or Worcester County.

The Reginald Bryant Allen Fund: The income from this fund is to be awarded annually to a deserving student majoring in mathematics.

The Alumni Group Scholarship: One full tuition scholarship to an accredited freshman is awarded from a fund established by the trustees and the first three classes to graduate from Clark College, '05, '06 and '07.

The Charles W. and Annie L. Bruninghaus Fund: The income from this fund, established in 1957, provides scholarship aid to undergraduates.

The Levi Knowlton Fund: A bequest of Mary H. Nixon in honor of her father, Levi Knowlton, to provide scholarship aid to undergraduates.

The Abraham Persky Scholarship Fund: The income of this fund is used to assist deserving undergraduates.

Pleiades Scholarship: This scholarship is awarded annually to a member of the Women's College on the basis of active citizenship, scholarship and financial need from funds raised by Pleiades, senior women's honorary society.

The Probus Club Scholarship: This scholarship is supported by the Probus Club of Worcester.

The National Council of Jewish Women Scholarship: The Worcester section, National Council of Jewish Women, awards a scholarship each year to a Jewish student of the Women's College who resides in Worcester County.

The High School Basketball Tournament Scholarship: Receipts of the High School Basketball Tournament held annually at Clark provide assistance to male undergraduates.

The Art Museum Scholarship: This scholarship is available to Worcester Art Museum students to pursue studies at Clark.

LOAN FUNDS

The following loan funds are currently available to undergraduates:

The Alumni Loan Fund: Established by the trustees and alumni for undergraduate assistance.

The May S. Rogers Loan Fund: The fund is available to undergraduates who need loan assistance.

The Haskell Talamo Loan Fund: The fund has been established by relatives and friends of the late Dr. Haskell Talamo, Clark '16.

The Louis N. Wilson Fund: The fund was established by the first librarian of Clark, as a loan source for male students in the college.

National Defense Student Loans: These loans are available to undergraduate students, especially those with superior records who desire to teach in elementary or secondary schools or who have special aptitude in science, mathematics or a modern foreign language.

Student Services

DINING HALL

The University Dining Hall is operated for the convenience of the students and staff of the University. Service is cafeteria style. Undergraduates who do not live at home are required to eat at the Dining Hall. Other members of the university are welcome on a permanent basis or for single meals.

DORMITORIES

Men not living in their own homes are required to live in the men's dormitory or in a fraternity house. Rooms are reserved on



receipt of the dormitory deposit fee. The deposit is later applied to room rental charges.

Women not living in their own homes are required to live in the women's dormitory. Other arrangements are permitted only on written request from a parent or guardian and the consent of the Dean of Women.

Room reservations and deposit procedures are the same for women's and men's dormitories.

INFIRMARY Facilities are provided at the University Infirmary for the treatment of emergencies and for minor medical services to all students while they are on campus. In addition, there is provision for the temporary hospitalization of resident students in cases of more serious illness. A nurse and university physicians are in attendance. The infirmary is open throughout the academic year.

**HEALTH AND
ACCIDENT
INSURANCE** A student has the option of subscribing to a low-cost health and accident insurance which will cover medical contingencies other than those available at the infirmary.

**PSYCHOLOGICAL
CLINIC** A psychological clinic is available on campus to provide testing and counseling services to students who wish help in academic or personal adjustment. If desired, other more appropriate university or community resources can be recommended to the student. The staff includes clinic director, Dr. Robert W. Baker, other clinical psychologists in the Department of Psychology and consultants in psychiatry, psychiatric social work and clinical psychology.

**GUIDANCE
AND
PLACEMENT
BUREAU** Individual counseling on problems of vocational planning and adjustment to college life is also available through the Guidance and Placement Bureau. The service supplements the advisory services of individual teachers and deans. The bureau assists the student in job exploration, informing him of available positions and arranging interviews with potential employers. Students are urged to establish a permanent reference file. Part-time employment opportunities are also listed with the bureau for students who wish to work during their college career to help meet college expenses. The bureau is directed by Dr. James M. Coffee, associate professor of education.



Student Life

STUDENT LIFE

Student life at Clark is, as expected at a small institution, friendly and informal. Students are expected to conform to recognized standards of morality, good order and consideration for others. College activities are under a minimum degree of faculty supervision. Though all activities are not listed below, some deserve description.

STUDENT ACTIVITIES FEE

Non-athletic activities are partially supported by the student activities fee which, in addition, admits students to all athletic contests on campus, provides them with the college newspaper and yearbook and admits them to certain lectures, plays and concerts.

LECTURES AND CONCERTS

Throughout the year, lectures and concerts are held on campus bringing outstanding scholars, musicians and artists to the campus. The Clark Fine Arts Course and the newly-established Clark Faculty Lectures in the Humanities are the two major sources of such cultural activity. In addition, the student assemblies also bring outstanding lecturers to the campus. In recent years, these programs have included the Budapest String Quartet, Canadian Players, Robert Gorham Davis, Henri Peyre, Turnau Opera Players and the National Ballet of Finland.



MUSIC

Musical organizations open to all students include the University Chorale, Concert Choir, Madrigal Singers, "Hit'n Misters" and the Chamber Players.

DRAMATICS

The Clark University Players Society each year presents dramatic offerings with student casts. It has a distinguished record of productions which, in recent years, has included *Medea*, *Our Town*, *Twelfth Night* and *Hedda Gabler*.

SPEECH AND DEBATE

The Debate Council annually directs a High School Debate Clinic as well as entering numerous debate contests.

SOCIAL SCIENCE FORUM

In recent years, this group has brought to campus such persons as Norman Thomas, Rev. Willard Uphaus and Thurgood Marshall, offering an opportunity for students to hear and question controversial views.

PUBLICATIONS

Students may join the staffs of *Scarlet*, weekly student newspaper; *Helicon*, student literary magazine; *Fotch*, student humor magazine; or *Pasticcio*, student yearbook.

OTHER ORGANIZATIONS

Other campus organizations are affiliated with areas of department instruction, such as the Physics, Psychology and German clubs; hobbies or interests, such as the Chess Club, Pre-Law Club

or Society for the Advancement of Management; and other activities, such as the Outing Club.

FRATERNITIES

Four fraternities are currently associated with the university. They are Lambda Chi Alpha, Tau Epsilon Phi, Kappa Phi and Phi Sigma Delta. All own fraternity houses nearby campus where members live.

GRYPHON AND PLEIADES

Each year, a group of men and women are chosen from the junior class on the basis of outstanding characteristics to join Gryphon—senior men's honorary society, or Pleiades—senior women's honorary society. The societies play an important role in campus life and in maintaining the traditions of the College. They supervise such annual events as *Rope Pull*, *Spree Day* and the *Christmas Tea*. In addition they each sponsor an annual lecture.

SCARLET KEY

In addition to acting as guides for campus visitors, *Scarlet Key*, a sophomore-junior service organization, undertakes other activities beneficial to the University.

Physical Education and Athletics

PHYSICAL EDUCATION

Physical Education is required of all students for the general promotion of their health and mental efficiency. Two years of physical education, two hours per week, is a prerequisite for graduation. Students are excused from this requirement only on the recommendation of the medical director.



The physical education program for women requires, during each of the two years, attendance at classes in body mechanics and one of the rhythmic activities. Participation in one group sport and in one individual sport is also required. Folk dancing, square dancing and modern dancing are offered.

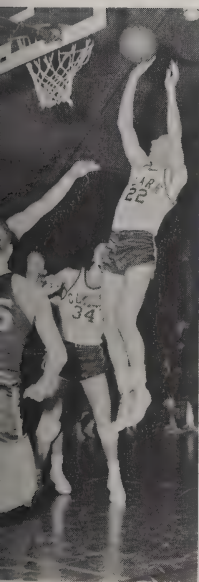
ATHLETICS

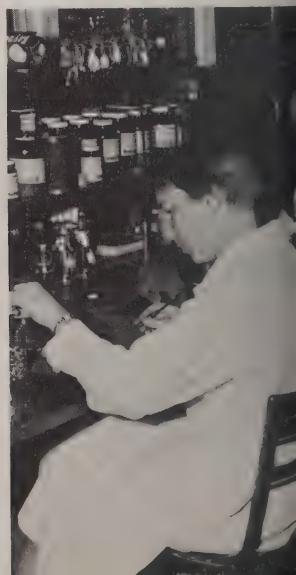
Students in the Men's College have the opportunity to participate in intercollegiate soccer, baseball, tennis, basketball, golf and crew. Competent coaches have immediate supervision over the teams.

Students in the Women's College can participate in hockey, crew, archery, tennis, basketball, volley ball, badminton, fencing, softball and golf. Tournaments are held in the spring and fall and trophies are awarded to winners. Women use their own gymnasium for practice but have the use of the Alumni Gymnasium for games with outside organizations.

ELIGIBILITY

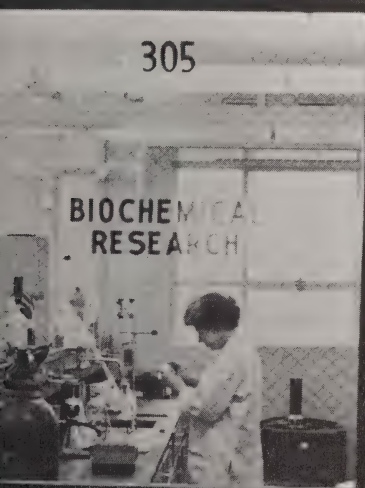
Participation in organized extracurricular competitive activities is denied only when a student's scholastic record indicates that continuance in an activity might be responsible for scholastic failure. Students carrying less than a full program of studies are ineligible unless the reduced program permits graduation at the end of the year in which the program is carried. A student transferring with advanced standing from another four-year college is ineligible for one calendar year from the date of registration at Clark to participate in any varsity sport in which he participated at the previous institution. Special students are not normally entitled to participate in competitive intercollegiate sports.





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BIOCHEMICAL
RESEARCH



THE GRADUATE SCHOOL

The Graduate School

GENERAL INFORMATION

Clark University was initially established as one of America's first institutions dedicated exclusively to graduate study and research. Its faculty and graduates have endowed the university with an impressive record of accomplishments through the years. Under the administration of the Graduate Board, Clark offers programs leading to master's and doctor's degrees to qualified holders of a bachelor's degree or its equivalent of attainment.

Master of Arts degrees are offered in the fields of biology, chemistry, economics, education, geography, government, history, international relations, mathematics, physics, psychology and sociology.

Doctor of Philosophy degrees are offered in chemistry, economics, geography, history, international relations, and psychology.

Departments which do not at present accept candidates for graduate degrees may offer courses which are suitable for inclusion in a program of graduate study.

Scholarships and fellowships afford financial aid to candidates for the graduate degrees and are listed at the end of this section. Additional information concerning departments and their offerings will be found in the section entitled "Departments and Courses."

INQUIRIES

General inquiries and correspondence concerning the Graduate School should be directed to the Secretary of the Graduate Board. Inquiries concerning specific programs of graduate work and applications for admission should be addressed to the chairman of the department concerned.

ADMISSION TO THE GRADUATE SCHOOL

Admission to the Graduate School may be granted only by the Graduate Board on the recommendation of a department of the University. Admission to the school does not imply admission to candidacy for a degree.

Application: A prospective applicant should communicate with the department in which he expects to do his major work. If he is encouraged by the department to make application, he will be provided with application blanks. These should be returned to

the chairman of the department with an official transcript of undergraduate work and letters of recommendation from at least two persons who are competent to judge the applicant's qualifications.

In addition, applicants for admission to the Graduate School are strongly urged, and may be required, to submit a record of attainment in the Graduate Record Examination given by the Educational Testing Service, Princeton, N. J.

Application for both admission and for financial aid should be completed not later than March 1 if the applicant intends to begin his studies in the following September. Applications may be submitted, however, throughout the year and periodically are considered by the Graduate Board.

Admission: Admission to the Graduate School is granted for entry only at a specified time and lapses if the student fails to enter at that time. Admission as special or part-time graduate students may be granted to qualified applicants who do not wish to work for a degree or who cannot devote full time to study.

MASTER
OF ARTS

Residence: An academic year of full-time study in residence, or its strict equivalent in summer sessions and part-time study, is a minimum requirement for a master's degree. Residence study is broadly defined as graduate work done at Clark University under the immediate personal supervision of at least one member of the university faculty.

Foreign Language: A reading knowledge of a foreign language, usually French or German, may be required of candidates for the degree of master of arts at the discretion of the major department.

Candidacy: Application for admission to candidacy for a master's degree should be filed with the Secretary of the Graduate Board not later than the first week of the last full semester which the student expects to spend in residence as a candidate for this degree.

Applications will be considered by the Graduate Board when the student has completed one semester of full-time graduate work or its equivalent in residence at the University, obtained the written endorsement of his major department and paid the diploma fee and publication fee.



Candidacy for the degree of Master of Arts is good through the fourth commencement after admission to candidacy. For satisfactory reasons, candidacy may be extended once for an additional period of three years by vote of the Graduate Board. If the candidacy expires without the degree having been awarded the diploma and publication fees, less any expenses incurred, are returned.

Course Requirements: Each student must meet a minimum course requirement of five courses, or their equivalent in half-courses. The program must be approved by the major department. One of the courses may be a research course devoted to the preparation of the thesis.

Thesis: The thesis will be written on a topic in the field of the student's special interest under the supervision of a member of his major department. A copy of the thesis, a précis of it approved by the supervising instructor, and an academic history page must be deposited in the Registrar's office not later than three weeks before the date of the commencement at which the degree is to be conferred. A second copy of the thesis with a

copy of the précis must be delivered to the major department. The précis may not exceed 75 words in length. The title page, précis and academic history forms are obtainable from the Registrar. The ribbon copy of the thesis must be typed on prescribed paper, marginally ruled in black and obtainable at the University Bookstore.

The thesis is deposited by the Registrar in the University library. The précis is printed by the University in an annual publication, *Dissertations and Theses*.

Each candidate must make a satisfactory record in such written examinations as may be required by the major department and in a final oral examination by a committee of three or more, two of whom must be members of the Graduate Board.

MASTER OF
ARTS IN
EDUCATION

The residency, candidacy, course and examination requirements are basically the same as those listed for the degree of Master of Arts.

Thesis: Students may choose one of three options, subject to the approval of the Department of Education. They may choose to (1) prepare a thesis or special report, as required for the M.A. degree; or (2) elect two additional semester courses in subject-matter fields; or (3) elect a two-semester, or double, seminar in which papers are prepared and presented to fellow students and staff.

Further information concerning the degree of Master of Arts in Education may be found in the section, "Departments and Courses," listed under the Department of Education.

DOCTOR OF
PHILOSOPHY

Only such candidates as give evidence of general proficiency, power of investigation and high attainments in the special fields in which their major subjects lie will be encouraged to proceed to the degree of Doctor of Philosophy.

Residence: The minimum requirement is one year of full-time study, or its equivalent in part-time work, in residence which is broadly defined as graduate work done at Clark University under the immediate personal supervision of at least one member of the university faculty. If the degree of Master of Arts has been earned at Clark, this requirement is an addition to the residence requirement for that degree. For the degree of Doctor

of Philosophy, four courses, or the equivalent in half-courses, is a normal full-time program.

Foreign Language: A prospective candidate is advised to prepare himself early for the examinations in the reading of modern foreign languages. Usually the student must pass two language examinations. French and German are normally required but the Graduate Board may authorize the substitution of another language for one of these and a student's major department may require additional languages.

A department, under special circumstances and with the approval of the Graduate Board, may permit a student to substitute for the usual language requirements: (1) the passing of an examination in either French or German and, in addition, certification by the department that the candidate has demonstrated a working knowledge of the language in the departmental program; and (2) the satisfactory completion of an additional program of studies in a field related to the major program.

The language examinations are conducted by a committee composed of representatives of the modern language departments and a representative of the student's major department. The results of the language examination are reported to the Registrar by the language committee; the results of substitute requirements are reported by the department. A student must fulfill the above requirements before he will be permitted to take the preliminary examination for the degree of Doctor of Philosophy.

Foreign students whose native tongue is not English may petition the Graduate Board, subject to the approval of the department concerned, to omit either French or German if both languages are not necessary for the field of concentration.

Candidacy: Applications for admission to candidacy must be filed no later than November 1st in any academic year by students who hope to receive the degree at the end of that academic year.

An application for admission to candidacy will be considered by the Graduate Board when the applicant has (1) completed two full academic years of graduate work, or its equivalent in part-time work, including one year at Clark University; (2) passed the required examinations in foreign languages, or com-

pleted satisfactorily a substitute program; (3) passed a preliminary examination in his chosen fields of study; (4) obtained the written endorsement of his major department; and (5) paid the diploma fee and publication fee.

Candidacy for the degree of Doctor of Philosophy is good through the fourth commencement after admission to candidacy. For satisfactory reasons, candidacy may be extended once for an additional period of three years by vote of the Graduate Board. If candidacy expires without the degree having been awarded, the diploma fee and publication fee, less any expenses incurred, are returned.

Dissertation: A dissertation which is expected to make an original contribution to some special field of knowledge is required of each candidate. The dissertation, approved by the chief instructor, is laid before the examining committee at the final oral examination.

An abstract of the dissertation, not exceeding 600 words in length, and a précis, not exceeding 75 words, both approved by the instructor under whom they were written, are also required.

Not later than four weeks before the commencement at which the degree is to be conferred, the first, or ribbon, copy of the



dissertation, together with two official title pages, an academic history page, the first copy of the abstract and of the précis, each in a form prescribed, must be delivered to the Registrar. At the same time, a second copy of the dissertation and of the abstract may be required by the major department. The title page, précis and academic history forms are obtainable from the Registrar. The ribbon copy of the dissertation must be typed on prescribed paper, marginally ruled in black, obtainable at the University Bookstore.

The Registrar deposits the dissertation and the abstract in the University library where they remain permanently. A microfilm copy of each dissertation is made by University Microfilms, Inc., of Ann Arbor, Mich., and is available for duplication by them on request. The abstract is printed in *Dissertation Abstracts*, which is widely circulated both in this country and abroad to subscribing libraries and leading abstracting services. The précis is printed by the University in an annual publication, *Dissertations and Theses*.

Final Examination: The final examination is oral and lasts for at least two hours. Additional written examinations may be given if the major department so directs. The candidate is expected to defend his dissertation and, at the discretion of the examining committee, may be questioned on the entire special field of his study. The oral examination is conducted by a committee of at least four members, including the chairman and one other member of the major department, a member of the Graduate Board under whom the candidate has done no work, unless such a member has participated in the preliminary examination of the candidate, and such other examiners as may be duly appointed. The president of the University is authorized to invite any person from within or without the University to be present and to assist in the examination.

GRADUATE
SCHOLARSHIPS,
FELLOWSHIPS
AND
ASSISTANTSHIPS

Graduate fellowships and scholarships are provided for well-qualified, full-time graduate students by the University from endowed funds and from other sources. Financial aid to graduate students is available also in the form of grants from a number of special funds, and in some departments, from sponsored research grants. A limited amount of part-time employment is available in the various offices and departments of the University.

Frequently, as in the case of departmental assistants, this employment yields useful experience.

Application: Application for a scholarship or fellowship to begin in September should be made before March 1 to the chairman of the department in which the applicant expects to do his major work. Late applications are acted upon periodically. All applications, after endorsement by the department, go to the Graduate Board for final action.

According to an agreement between the members of the Association of American Universities, elections of fellows and scholars will be communicated in April, but not before, to each successful candidate.

Research Fellowships: These fellowships may be awarded to graduate students who have fulfilled their residence requirements and who are pursuing a full-time doctoral program.

Teaching Assistant Scholarships or Fellowships: These may be awarded to teaching assistants who are engaged in full-time activity on campus, of which approximately half-time is devoted to teaching duties and approximately half-time, up to a maximum of three courses, is devoted to graduate study.

Teaching Assistantships: In several departments, teaching assistantships, involving less than half-time, are available with stipends which vary accordingly to the amount of service agreed upon.

Assistantships: In several departments, assistantships are available. They involve a variety of services with stipends to correspond, and usually provide the student with experience which will be useful in his later professional work.

Graduate Fellowships and Scholarship Funds: Stipends for graduate fellowships and scholarships are provided by:

THE GEORGE FRISBIE HOAR FUND, the gift of Andrew Carnegie in honor of the second president of the University's Board of Trustees;

THE AUSTIN S. GARVER FUND, a bequest from Austin S. Garver, member of the Board of Trustees from 1908 to 1918;

THE CHARLES H. THURBER FUND, provided by Charles H. Thurber, member of the Board of Trustees from 1913 to 1938 and president of the board from 1919 to 1937;

THE GEORGE S. BARTON FUND, a bequest from the Hon. George S. Barton of Worcester, fund income to be used for the benefit of native-born citizens of Worcester;

THE ALUMNI ASSOCIATION FUND, provided by alumni who hold the degree of Doctor of Philosophy to benefit students studying for that degree;

and THE JOSEPH F. DONNELLY MEMORIAL FUND, a bequest from Lucretia F. Donnelly to help men who are enrolled in a course leading to the degree of Doctor of Philosophy.

GRADUATE AID

Student aid is available from the following funds:

THE JOHN WHITE FIELD FUND, established by Mrs. Eliza W. Field to provide for the minor needs of a scholar or fellow;

THE ELIZA D. DODGE FUND, fund income to be granted to graduate students of limited means who are engaged in research work;

THE CHESTER BLAND FUND, the income used preferably to provide aid to a promising student, either in residence or engaged in research elsewhere, under the direction of the Department of History, Government and International Relations or may also be used to defray expenses of visiting lecturers or of departmental research;

and THE MORTON L. "SONNY" LAVINE FOUNDATION, a memorial to Lieutenant Lavine of the U. S. Army, World War II, with income to be used for the promotion of research in the Department of History, Government and International Relations.

GRADUATE LOANS

Loans, bearing interest at three percent per year, are available for graduate students from these funds:

THE MARY S. ROGERS SCHOLARSHIP AND LOAN FUND, established in 1926 for the benefit of students in the graduate school;

and THE SARAH M. THURBER LOAN FUND, established by the late Dr. Charles H. Thurber, former president of the university Board of Trustees, as a memorial to his mother.

NATIONAL DEFENSE STUDENT LOANS

These loans are available to graduate students, especially those with superior records who desire to teach in elementary or secondary schools or who have special aptitude in science, mathematics or a modern foreign language. Applications for these loans should be made at the Bursar's office.



THE SUMMER SCHOOL



The Summer School

SUMMER STUDY Intensive instruction in numerous fields of study is offered through two summer programs: a six-week summer session and a three-week intersession program. A variety of courses is offered for undergraduates, graduate students and teachers. A student may take three semester courses (9 semester hours of credit) by attending the Intersession and the Summer Session. Evening courses are also available during the summer to all students to continue their education while engaged in day-time employment. The student is encouraged to attend informal afternoon seminars, conferences and week-end excursions to New England cultural centers.

DEGREES AND CREDIT

All courses offered in the Summer Session or Intersession programs are accepted at Clark for credit toward bachelor's degrees unless they are specifically limited in the description of the course. Many courses count toward the degrees of Master of Arts, Master of Arts in Education and Doctor of Philosophy. However, approval for such courses should be obtained in advance from the student's major department.



The degree of Master of Arts may be obtained in certain fields by completing successfully a full-time program for five summers. Students interested in such a program should discuss their plans with the chairman of the department concerned.

Graduate students formally registered in the Summer School may, with the approval of their major department, enroll in thesis courses under the direction of regular members of the staff.

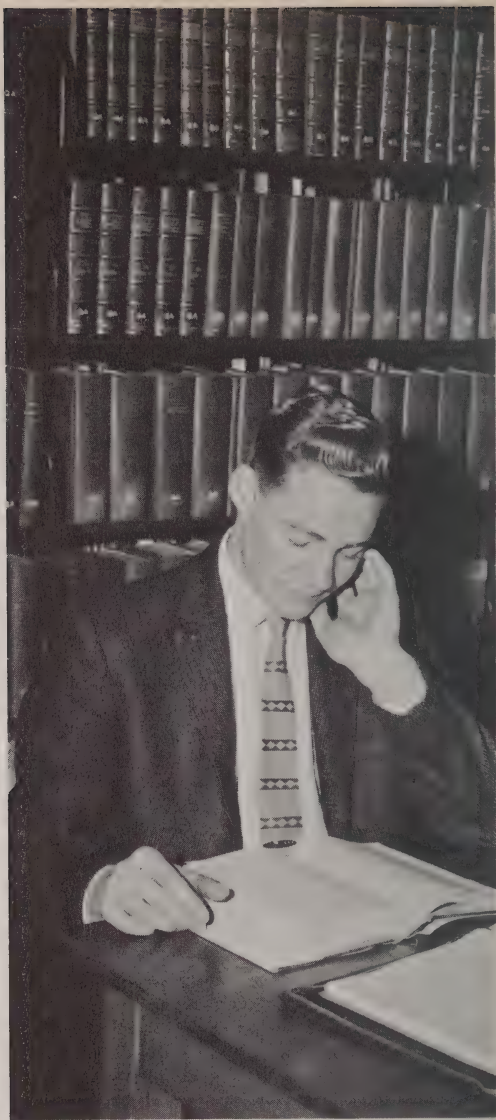
Each single course offered in the Summer School is equivalent to a half-year course of the Clark academic year and yields three semester hours of credit. The double courses in languages and occasionally other subjects, which meet for two lecture periods a day for six and one-half weeks, are equivalent to year-courses or six semester hours.

A student may carry in a normal program one course in the Intersession and two courses in the Summer Session. Permission to carry an additional course may be granted but only in exceptional cases and with approval in writing prior to registration.

SUMMER
SCHOOL
CATALOG

Detailed information concerning the Summer Session and Intersession are contained in a Summer School catalog which may be received upon request from the director of the Summer School.

EVENING COLLEGE



The Evening College

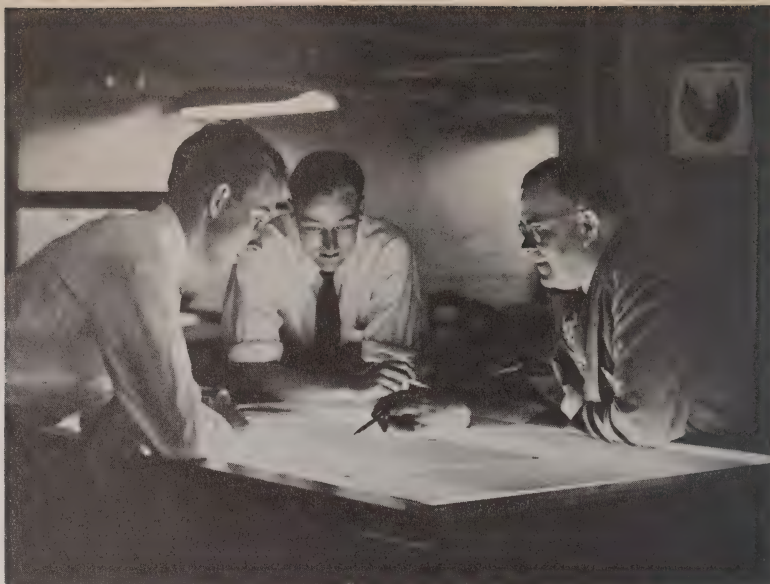
GENERAL INFORMATION

The Evening College, established in 1953 as an institution devoted to adult learning, has three primary functions. With the conviction that education in our modern society must be a life-long process, it provides university education for adults of all ages who seek further knowledge and personal development through selected studies in the broad areas of the liberal arts. Further, in recognition of the rapidly developing and changing needs of business and the professions, it provides courses designed to help working men and women improve their occupational skills and to prepare for positions of increased responsibility.

Secondly, the Evening College provides an opportunity for adults to earn the bachelor's degree, exclusively by evening study, through programs planned to meet the unique educational needs of the mature person. Formal programs are available leading to the degree of Bachelor of Science in either general studies or business administration. The Evening College also offers the Diploma in General Studies after completion of a short formal program in liberal education designed specifically for adults.

Finally, as a community service, the Evening College organizes frequent non-credit short courses, institutes and seminars, which are tailored to the specific needs of various civic, professional and business groups.





ADMISSION

Students may be enrolled for either individual courses or formal programs of study.

Individual Courses: Admission to individual courses in the Evening College is open to all interested adults seeking to further their education. High school graduation is not required but desirable. Continued attendance is contingent upon evidence of ability to profit from the instruction offered. Advanced courses for which prerequisite courses or experience are indicated are open only to persons who meet the stated requirements.

Admission To Formal Programs: Adults applying for a formal program of study in the Evening College will be required to submit records of their previous schooling prior to admission. Except under unusual circumstances applicants must possess a diploma from an accredited high school. Applicants for the Bachelor of Science degree or the Diploma in General Studies who have not attended college previously may arrange to have their high school records forwarded to the Evening College on forms supplied to them on request to the college. Adults who have attended other colleges should request that their transcripts be forwarded directly to the Evening College.

EVENING COLLEGE CATALOG

Detailed information about the Evening College is contained in a special catalog available on request from the director of the Evening College. Catalogs are issued in advance of registration for the Fall and Spring semesters.



DEPARTMENTS AND COURSES

Departments and Courses

CONTENTS	Listed on the following pages are department faculties, undergraduate and graduate programs and course offerings. The departments are listed in alphabetical order.
DEPARTMENT FACULTIES	The staff of each department is listed by rank and by alphabetical order within rank. Department chairmen are listed first. For further information concerning the faculty, see the general faculty listing.
DEPARTMENT PROGRAMS	Each department offers information concerning its undergraduate offerings and requirements as well as the offerings and requirements concerning graduate study, if a graduate program is offered. For further information concerning a major field of study, students should consult their faculty advisers or major department chairmen.
DEPARTMENT COURSES	The course offerings of each department are listed in their numerical sequence. The announced courses are subject to any modification which may become necessary.
COURSE NUMBERING SYSTEM	<p>Each course is indicated by number and title. A course number, unmodified by "a" or "b" indicates a year-course, one which continues through two semesters of an academic year. A course number followed by an "a" refers to a half-course offered in the first semester. A number followed by a "b" refers to a half-course offered in the second semester.</p> <p>Two-semester courses are divisible unless an explicit statement of indivisibility appears in the course statement. Courses which are indivisible require the successful completion of the first semester as a prerequisite to entering the second semester.</p>
COURSE SEQUENCE	<p>Courses are arranged, in general, in sequence progressing from elementary to advanced courses.</p> <p>Courses which are <i>primarily for undergraduates</i> are designated by numbers beginning with the numeral 1.</p> <p>Courses which are for <i>advanced undergraduates and graduate students</i> are designated by numbers beginning with the numeral 2.</p>

Courses which are *primarily for graduate students* are designated by numbers beginning with the numeral 3.

ORDER OF	The listing on the following pages is as follows:	
DEPARTMENTS	American Civilization	Geology
AND	Biology	German
OFFERINGS	Business Administration	History, Government and
	Chemistry	International Relations
	Classics	Interdepartmental Majors
	Economics and Sociology	Mathematics
	Education	Music
	English	Philosophy
	Fine Arts	Physics
	Freshman Orientation	Psychology
	General Education	Romance Languages
	Geography	

American Civilization

An interdepartmental major in the field of American Civilization is offered to candidates for the degree of Bachelor of Arts. The program is outlined under the listing for Interdepartmental Majors.

Biology

DEPARTMENT FACULTY

Rudolph F. Nunnemacher, Ph.D., *Professor of Zoology,*
Department Chairman

Harris Rosenkrantz, Ph.D., *Associate Professor (affiliate) of Biology*

Aldo P. Truant, Ph.D., *Associate Professor (affiliate) of Biology*

Vernon Ahmadjian, Ph.D., *Assistant Professor of Botany*

George Camougis, Ph.D., *Assistant Professor of Physiology*

John T. Reynolds, M.S., *Assistant Professor of Microbiology*

Burton N. Gates, Ph.D., *Research Associate in Botany*

UNDERGRADUATE PROGRAM

Biology 11 presents a comprehensive view which is prerequisite to all other courses in the department. A departmental major must take Biology 11, three advanced courses in biology, Chemistry 11, Physics 11, Mathematics 11 and at least one additional course in chemistry, physics or geology. Mathematics 11 does not count toward the fulfillment of the major requirements.

GRADUATE PROGRAM

The department offers courses leading to a Master of Arts degree in specialized phases of botany, zoology, physiology and bacteriology. Admission as a candidate to the master's

program assumes adequate preparation in the basic sciences, an over all undergraduate record of B or better and satisfactory standing in the Graduate Record Examination. The program usually requires two full academic years and involves the completion of five full graduate courses and an acceptable thesis.

COURSES

11. GENERAL BIOLOGY.

Principles and problems of biology. First semester is concerned with the botanical kingdom; second semester with the animal kingdom. One laboratory period per week. Indivisible course, except by approval of the department. Open to freshmen.

Mr. Ahmadjian, Mr. Nunnemacher.

12a. COMPARATIVE ANATOMY.

Gross and microscopic morphology of vertebrates from a comparative standpoint, with emphasis on the evolution of animals from fish to mammals. Two lectures and two laboratory periods per week.

Mr. Nunnemacher.

14a. CRYPTOGAMIC BOTANY.

Morphology, physiology and ecology of the lower plants. Lectures will place special emphasis on algae, fungi, lichens and mosses. Laboratory work will be primarily concerned with experimentation on the sexuality and genetics of selected types of bacteria, fungi and algae. Field work will be included. Prerequisite: First semester Biology 11. Three lectures and one laboratory per week.

Mr. Ahmadjian.

15b. SYSTEMATIC BOTANY.

Taxonomy and classification of flowering plants, with emphasis on New England flora. A collection of 100 plants is required as well as a two-day spring collecting trip to the Berkshires. Prerequisite: First semester Biology 11. Three lectures and one laboratory period per week.

Mr. Ahmadjian.

17b. GENERAL ECOLOGY.

Introductory study of the distribution of plants and animals, their inter-relationships and adaptations to a wide variety of environments such as seashore, sand dunes, woodlands and ponds. Field trips to Mt. Monadnock and other areas of ecological interest will be taken during laboratory periods or on Saturday. Three lectures and one laboratory period per week. Usually offered during the summer.

Mr. Nunnemacher.

18b. GENETICS.

Principles and problems of genetics.

Not offered, 1961-62.

Mr. Ahmadjian.

120a^b HISTOLOGY.

Comprehensive course on tissue structure, with emphasis on the study of mammalian tissues. Two lectures and two laboratory periods per week.

Mr. Nunnemacher.

123b. PARASITOLOGY.

Survey of parasitic forms from both animal and plant kingdoms, with emphasis on the role of parasitism as a specialized mode of life. Prerequisites: Biology 11 and consent of the instructor. Three lectures and one laboratory period per week.

Mr. Reynolds.

132a. CELLULAR BIOLOGY. (Given as #137a in 1961-62)

Development and implications of modern concepts of cells and their activities. Prerequisite: Biology 11, or its equivalent. Three lectures per week.

Mr. Reynolds.

132a Microbiology

Not offered, 1961-62

Mr. Reynolds

140b. PRINCIPLES OF PHYSIOLOGY.

Introduction to basic physiological concepts at the cellular level followed by animal physiology, with emphasis on vertebrates. Prerequisite: Biology 11. Three lectures per week. *Not offered 1966-67*
Mr. Camougis.

201. ADVANCED SYSTEMATIC BOTANY.

Not offered, 1961-62.

204b. LICHENOLOGY.

Taxonomy and physiology of lichens and isolated lichen components. Laboratory emphasis on special projects and field work. Prerequisite: Biology 14a. Three lectures and one laboratory period per week. *Not offered 1960-61*
Mr. Ahmadjian.

215a. INVERTEBRATE ZOOLOGY.

1960-61 on
Not offered, 1961-62.

221^b. EMBRYOLOGY.

Consideration of the fundamentals of vertebrate embryology. Two lectures and two laboratory periods per week. *(Offered 2nd sem. 1961-62; Not offered 1960-61)*
Mr. Nunnemacher.

230b. BACTERIOLOGY.

Biology of the bacteria and certain related forms. Prerequisites: Biology 132a, Chemistry 13 (second semester of Chemistry 13 may be taken concurrently) and consent of the instructor. Three lectures and one laboratory period per week. *Not offered 1960-61*
Mr. Reynolds.

231b. BACTERIAL PHYSIOLOGY.

~~Not offered, 1961-62~~

Lecture topics and laboratory exercises selected to demonstrate chemical and physical principles underlying bacterial activities. Prerequisites: Biology 230a, and consent of the instructor. Biology 240a is recommended. Two lectures and two laboratory periods per week.
Mr. Reynolds.

240a. GENERAL PHYSIOLOGY.

Introduction to the physical and chemical phenomena underlying the functions common to living organisms. Prerequisites: Biology 11, Chemistry 11 and Physics 11. Two lectures and two laboratory periods per week.
Mr. Camougis.

241b. ENDOCRINOLOGY.

Not offered, 1961-62.

Study of the roles of various endocrine mechanisms in mediating physiological activities. Prerequisite: Consent of the instructor. Three lectures per week.
Mr. Camougis.

242b. COMPARATIVE ANIMAL PHYSIOLOGY.

Not offered, 1961-62.

The more important physiological phenomena are treated comparatively throughout the animal kingdom. Prerequisites: Biology 140b or 240a or the equivalent. Two lectures and two laboratory periods per week.
Mr. Camougis.

249b. NEUROPHYSIOLOGY.

Physiology of central and peripheral nervous systems, receptors and muscles, considered in both vertebrates and invertebrates. Prerequisite: Biology 140b or 240a. Three lectures and one laboratory period per week.
Mr. Camougis.

250a. UNDERGRADUATE SEMINAR IN BIOLOGY.

Designed to provide experience for advanced undergraduates in the presentation and critical evaluation of research reports. Limited enrollment. Prerequisite: Consent of the instructor. Equivalent of three lectures per week. *Not offered 1960-61*
Mr. Reynolds.

224A NEUROANATOMY

NOT OFFERED, 1961-62

MR. NUNNEMACHER

260. SPECIAL PROBLEMS.

Advanced semi-independent study of an approved topic under the direction of a departmental member. Hours and credit to be arranged. Staff.

S. 262. INSTRUMENTAL PROCEDURES IN BIOLOGICAL INVESTIGATIONS.

Theory and application of various analytical procedures and use of modern instrumentation in biological problems. Practical introduction to analytical balance, centrifuge, vacuum distillation, pH, dialysis, chromatography, counter-current distribution, photo-electric colorimetry, fluorometry, turbidometry, spectrophotometry and spectroscopy. Instrumentation will be coordinated with techniques of tissue preparation, histochemistry and radioactive tracers. Offered in the summer. Mr. Rosenkrantz.

300. READINGS AND RESEARCH IN BIOLOGY.

Staff.

350. GRADUATE SEMINAR.

Staff.

360. THESIS.

Staff.

Business Administration (*Division*)

DEPARTMENT FACULTY

F. Eugene Melder, Ph.D., *Professor of Economics*

George E. Hargest, M.B.A., *Associate Professor of Economics and Business Administration, Acting Director of Division of Business Administration*

Howard W. Nicholson, Ph.D., *Associate Professor of Economics*

George A. Balko Jr., M.B.A., *Assistant Professor of Business Administration*

Frederick E. Bamford, M.B.A., *Assistant Professor of Economics and Business Administration*

BERNARD SARACHEK, M.A., ASST. PROF. BUSINESS ADMINISTRATION, 1960-61

UNDERGRADUATE PROGRAM

The Division of Business Administration presents and supervises a four-year course of study leading to the degree of Bachelor of Science in Business Administration. The program is given cooperatively by the departments of Economics and Sociology, English, History, Government and International Relations, Mathematics, Psychology and the Natural and Physical Sciences. General supervision of the program rests with the Director and the Administrative Committee representing the faculty.

For the special requirements for the degree of Bachelor of Science in Business Administration, see that section listed under degree requirements. Students should note that the following business administration courses may not be counted toward the degree of Bachelor of Arts: 104a, 152b, 154b, 172a, 174b, 176a, 202, 204b, 206, 253, 254b, 281b.

Not listed

COURSES

Accounting

100. PRINCIPLES OF ACCOUNTING.

Organization and use of financial records with emphasis on interpretation as well as the techniques of procedure. Required of B.S. in B.A. degree candidates. *Mr. Hargest Staff.*

102. INTERMEDIATE ACCOUNTING.

Accounting principles and procedures and their application to asset, liability and proprietorship accounts. Analysis of financial statements, including statements from incomplete data and the statement of application of funds. Emphasis is on problem analysis and solution. Prerequisite: B.A. 100. Indivisible course. *Mr. Hargest.*

104a. FEDERAL TAX ACCOUNTING.

Legal and accounting fundamentals of federal income and social security taxes with emphasis on the preparation of returns. Prerequisite: B.A. 100. *Not offered, 1960-61 or 1961-62*

202. COST ACCOUNTING.

Basic principles of cost accounting as related to job order, process, estimated and standard cost systems. Cost for profit determination and for managerial control and decision-making are considered. Offered in alternate years. Prerequisite: B.A. 102 or consent of the instructor. *Not offered, 1960-61*
Mr. Hargest.

204b. AUDITING.

Analysis of the purpose and scope of the several classes of audits and discussion of professional ethics, auditing standards, internal control systems, audit procedures applicable to asset, liability and proprietorship accounts, and the use of worksheets and preparation of statements and reports. Prerequisite: B.A. 102. *Not offered, 1960-61 or 1961-62*

206. ADVANCED ACCOUNTING.

Theory and practice of accounting for branches, mergers, receiverships, estates and trusts, consolidated statements, budgets, municipal accounts, and other topics of advanced nature. Offered in alternate years. Prerequisite: B.A. 102. *Not offered, 1961-62.*
Mr. Hargest

Economics and Finance

Descriptions of these courses can be found in the announcement of the Department of Economics and Sociology.

ECONOMICS 11. PRINCIPLES OF ECONOMICS.

Required of B.S. in B.A. degree candidates.

ECONOMICS 13a. MONEY AND BANKING.

Required of B.S. in B.A. degree candidates.

ECONOMICS 13b. PROBLEMS IN MONEY AND BANKING.

ECONOMICS 15a. PUBLIC FINANCE.

ECONOMICS 140b. CONSUMER ECONOMICS.

ECONOMICS 21b. NATIONAL INCOME ANALYSIS.

ECONOMICS 22. LABOR ECONOMICS AND LABOR PROBLEMS.

ECONOMICS 24b. HISTORY OF ECONOMIC DOCTRINE.

ECONOMICS 25b. PROBLEMS IN PUBLIC FINANCE.

ECONOMICS 26. INDUSTRIAL ORGANIZATION AND GOVERNMENTAL CONTROL.

ECONOMICS 29a. ECONOMICS OF TRANSPORTATION.

ECONOMICS 205a. INTERMEDIATE ECONOMIC THEORY.

ECONOMICS 207. INTERNATIONAL ECONOMICS.

ECONOMICS 211b. COMPARATIVE ECONOMIC SYSTEMS.

ECONOMICS 231b. ECONOMIC HISTORY OF THE UNITED STATES.

120a. CORPORATION FINANCE.

Financial structure of modern industry with emphasis on the nature of the business corporation, its financial practices, types of securities, capital structure, financial reorganization, and the problems of internal financial control. Prerequisite: Economics 11. Required of B.S. in B.A. degree candidates.

Mr. Nicholson.

121b. INTRODUCTION TO INVESTMENTS.

Principles underlying investment analysis and policy; salient characteristics of governmental and corporate securities; policies of investment companies and investing institutions, relation of investment policy to money markets and business fluctuations; security price-making forces, construction of personal investment program and exchange operation. Prerequisite: B.A. 120a.

Not offered, 1960-61

Mr. Nicholson.

Management and Personnel Administration

170b. PRINCIPLES OF MANAGEMENT.

The principles disclosed through a study of planning, organizing, directing, assembling resources and controlling which apply equally to all fields of administration. Required of B.S. in B.A. degree candidates.

Mr. Bamford.

172a. INDUSTRIAL MANAGEMENT.

A survey of the techniques of executive control of manufacturing operations with special reference to such fields as specialization of labor, expansion, control of factors of production and internal organization.

Mr. Bamford.

176a. PRODUCTION CONTROL.

Inter-relationship of production control with other control techniques with discussion of production, forecasting, development and analysis, budgeting, scheduling, quality control and coordination. Case study method is used. Prerequisite: B.A. 170b.

1960-61 or

Not offered, 1961-62.

182b. INTRODUCTION TO PERSONNEL MANAGEMENT.

Emphasis is placed on integrating personnel management with other areas of management, including study of procuring, developing, maintaining and using an effective work force, communications, morale, and labor-management relations. Prerequisite: B.A. 170b.

Not offered 1961-62

184a. MANAGEMENT-LABOR RELATIONS.

Management-employee relationships with special reference to union and management

Offered 1st sem. only in 1961-62

bargaining. Opportunity for development of perspective and judgement regarding problems of management in shop industrial situations and labor relations law. Discussion and case methods are employed. Prerequisite: Economics 11. Mr. Melder.

272. MANAGEMENT POLICIES.

(Offered 2nd sem. only in 1960-61, 1961-62) ^{Mr. Sarachek}
Actual problems of representative business concerns based on specific case studies. Administrative coordination, business research, business policies, development of master plans and operating budgets, measurement of administrative effective. Prerequisite: B.A. 172a. Indivisible course. Mr. Bamford.

275a. ORGANIZATION THEORY.

Basic principles of organization with reference to promotion, formal and informal organization, departmentalization, line-staff relationships, decentralization and centralization, communication and the organization's bargaining relations with other organizations. Prerequisite: B.A. 170b. Mr. Bamford.

276b. MANAGERIAL ECONOMICS.

(Offered 2nd sem. only, 1961-62) ¹⁹⁶⁰⁻⁶¹ Not offered, 1961-62.
Economic concepts are analyzed and evaluated in terms of their applicability to the development of business policies. The criteria of usefulness are consistency of thought and measurability of the variables under consideration. Prerequisite: Economics 11. Mr. Bamford

279a. MANAGERIAL REVOLUTION.

(Offered as 1st sem. case, 1960-61) Not offered, 1961-62.
The social implications of the emergence of a professional managerial class in modern corporate capitalism with emphasis on the manner in which existing institutions and ideologies buttress the structure of corporate capitalism.

281b. PUBLIC AND EMPLOYEE RELATIONS.

(Offered 2nd sem. only, 1960-61) Not offered, 1961-62.
The company's relations with its employees, consumers, stockholders and the general public. Special emphasis will be given to the problems of communication. Mr. Sarachek

290. ANALYSIS OF BUSINESS PROBLEMS.

The course is designed to integrate principles covered in specialized Business Administration courses bringing business as a whole and its economic problems into perspective. Required of all seniors in the Business Administration program. Indivisible course.

Mr. Balko.

Marketing

150a. PRINCIPLES OF MARKETING.

The efficiency, social implications and public control of the activities and practices of business institutions in effecting a flow of tangible commodities between producer and consumer. Required of B.S. in B.A. degree candidates. Mr. Balko.

152b. ADVERTISING MANAGEMENT.

(Not offered, 1960-61)
Advertising as a tool of marketing, economic functions of advertising, advertising research, media selection, advertising organizations and testing. Mr. Balko.

154b. RETAILING PRINCIPLES.

(Not offered, 1961-62)
The retailer in our economy, the store and its organizations, aspects of buying and selling, operating activities and personnel, and retail control. Offered in alternate years.

252a. **MARKETING RESEARCH.**

Not offered, 1961-62.

Problems faced by business executives in marketing and the ways in which methods of scientific business research can be utilized for their solution. Prerequisites: Economics 11 and B.A. 160, or the equivalent. Offered in alternate years.

253b. **SALES FORECASTING.**

Not offered, 1961-62.

Application of statistical procedure to the problems of predicting market demand and sales of the individual firm. Prerequisites: Economics 11 and B.A. 160, or the equivalent. Offered in alternate years.

254a. **SALES MANAGEMENT.**

Not offered, 1960-61

The organization and direction of the efforts of a sales force, involving the establishment of a sales plan, placing the sales department in the company organization, formulating sales policies, organizing the sales department, recruiting, training, equipping, motivating and compensating salesmen, and measuring their performance. Prerequisites: B.A. 150a and B.A. 170b, or the equivalent.

Mr. Balko.

255b. **MARKETING POLICIES.**

Not offered, 1960-61

Analysis of how competition, demand, cost, distribution structure and legislation affect marketing decisions of the individual company in regard to products, brands, channels of distribution, selling, advertising, sales promotion and prices. Prerequisites: Economics 11 and B.A. 150a, or the equivalent.

Mr. Balko.

Statistics160. **BUSINESS STATISTICS.**

Statistical methods and techniques applied to data drawn from the business community. Includes sampling, statistical inference, estimation and decision-making, correlation—linear, multiple and curvilinear, analysis of time series and index numbers. Prerequisite: Mathematics 11. Required of B.S. in B.A. degree candidates. Indivisible course. Students ranking high in Mathematics 11 may, with the division director's consent, meet the requirement for B.A. 160 by taking Economics 29a.

Mr. Hargest.

Honors199b. **JUNIOR HONORS PROGRAM.**

Guided study for juniors planning to take B.A. 299 in their senior year.

Staff.

299. **SENIOR HONORS PROGRAM.**

Independent study of an approved topic for candidates for honors in accounting, management or marketing. Prerequisite: B.A. 199b.

Staff.

Candidates for honors in economics should register for Economics 280b and Economics 28.

Chemistry**DEPARTMENT FACULTY**

Gerson Kegeles, Ph.D., *Professor of Chemistry, Department Chairman*

Ralph I. Dorfman, Ph.D., *Professor (affiliate) of Chemistry*

William R. Nes, Ph.D., *Associate Professor of Biochemistry*

ARTHUR E. MARTELL, PH.D., PROF. OF CHEMISTRY & DEPT. CHAIRMAN, 1ST SEM. 1960-

Thomas T. Sugihara, Ph.D., *Associate Professor of Chemistry*
(On leave, first semester, 1961-62)

Edward N. Trachtenberg, Ph.D., *Associate Professor of Chemistry*

Otto F. Kalman, Ph.D., *Assistant Professor of Chemistry*

Allan M. Zwickel, Ph.D., *Assistant Professor of Chemistry*

UNDERGRADUATE PROGRAM

The department offers courses in chemistry for those who wish to major in the field, those who major in allied fields and those who wish an understanding of basic chemistry.

A major is required to take Chemistry 11, 13, 14a, 19, 190b and one chemistry elective; Physics 11; and Mathematics 12. Majors are strongly urged to take additional course work in mathematics and at least two years of German.

Two programs are offered for the chemistry major. The accelerated program is for students of better-than-average ability and offers an opportunity for significant honors work and concentration in advanced courses. Initial admission to this program is determined by a placement examination given at the beginning of the freshman year. The alternate, normal chemistry major's program still allows for honors work.

Majors who have not done well in the accelerated program during the freshman or sophomore years will continue with the normal program. It is also possible for students with excellent first-year records in the normal program to enter the accelerated program in the second year.

The accelerated program requires Chemistry 11, Physics 11, English 11 and Mathematics 11 (or Mathematics 12 if the student satisfies the mathematics placement examination taken at the beginning of the freshman year) during the first year; Chemistry 13 and 14a and Mathematics 12 during the sophomore year; Chemistry 19 and 190b (Mathematics 13 is recommended) during the junior year; and Chemistry 215 during the senior year.

The normal program requires Chemistry 11, English 11 and Mathematics 11 (or Mathematics 12 if the student satisfies the mathematics placement examination taken at the beginning of the freshman year) during the freshman year; Chemistry 13, Physics 11 and Mathematics 12 during the sophomore year; Chemistry 19 and 14a (Mathematics 13 is recommended) during the junior year; and Chemistry 190b during the senior year.

In addition, students in either program who intend to do graduate study in chemistry are advised to gain a reading knowledge of German and either French or Russian.

GRADUATE PROGRAM

The department offers courses leading to the degrees of Master of Arts and Doctor of Philosophy. These courses are in the fundamental fields of chemistry, supplemented by specialized courses and research work in organic, inorganic, physical and nuclear chemistry, and biochemistry.

Entering students must take a three-part written placement examination based on undergraduate inorganic and analytical, organic and physical chemistry. The examination is normally given during the week prior to registration. Performance on this examination does not affect the student's standing but is used to assist in the planning of his program of studies.

Every student is required to take Chemistry 212b, 230a, 322a, and either 218a or 340a during his residence. First-year graduate students participate for credit in Chemistry

379b), which is attended by all graduate students. Graduate students will participate in Chemistry 380 and 350; tuition is not charged for these two non-credit courses. Additional required courses will be determined in accordance with the student's field of specialization.

In addition, students must show facility in conducting a laboratory investigation and must demonstrate a command of the field of major research interest.

Graduate scholarships, teaching assistantships and research fellowships are available. An announcement offering detailed information concerning research facilities and graduate programs of study may be procured by writing to the department chairman.

TRAINING PROGRAM FOR STEROID BIOCHEMISTRY

A Training Program for Steroid Biochemistry has been established at the University through the cooperation of the Department of Chemistry in collaboration with the Worcester Foundation for Experimental Biology. Grants for the program are provided by the National Cancer Institute and the U.S. Public Health Service. Applications are invited for appointment as a postdoctoral fellow, from persons possessing Ph.D.'s, M.D.'s, or their equivalents. The appointment is for 12 months with a stipend of \$5,500. Pre-doctoral appointments are also made in this program. Appointees who successfully complete the program will be awarded a certificate. Academic credit can be arranged for Chemistry 390. Fellows may be selected to remain for further work in biochemistry. Further information concerning the program will be supplied upon request to W. R. Nes, Program Director.

COURSES

11. GENERAL CHEMISTRY.

Systematic study of the elements and their principal compounds and the fundamental laws and theories of chemistry. Three lectures and three laboratory hours per week. Prerequisite for all other courses in chemistry. Divisible with consent of the instructor.

(Mr. Martell + Mr. Bethune, 1960-61)

Mr. Zwickel, Mr. Kalman.

13. ORGANIC CHEMISTRY.

Lectures on the principles of organic chemistry and a laboratory study of the preparation and properties of important organic compounds. Three lectures and three laboratory hours per week. Prerequisite: a grade of C- or better in Chemistry 11.

Mr. Trachtenberg.

14a. ANALYTICAL CHEMISTRY.

Principles of chemistry underlying volumetric and gravimetric analysis. Laboratory analysis of simple inorganic systems. Two lectures and six laboratory hours per week. Prerequisite: Chemistry 13, may be taken concurrently.

Mr. Kalman.

19. PHYSICAL CHEMISTRY.

Principles of physical chemistry applied to gases, liquids, solutions, crystalline solids; chemical thermodynamics, homogeneous and heterogeneous equilibria, electrolytic conductance and transference, electromotive force, reaction kinetics, colloids. Three lectures and three laboratory hours per week. Prerequisites: Math. 12; Chemistry 13, 14a, may be taken concurrently. Additional course work in Mathematics is recommended.

Mr. Kegeles.

14A QUANTITATIVE ANALYSIS

NOT OFFERED, 1961-62

MR. SUGIHARA (1960-61)

NOT OFFERED, 1961-62

116A ORGANIC QUALITATIVE ANALYSIS

MR. MARTELL & MR. HEINERT, 1960-61

190b. ADVANCED PHYSICAL CHEMISTRY.

Elementary quantum-mechanical treatment of the structure of nuclei, atoms and molecules. Statistical mechanics of simple systems. Three lectures and three laboratory (instrumental analysis) hours per week. Prerequisite: First semester of Chemistry 19.

Mr. Sugihara.

212b. INORGANIC CHEMISTRY.

Correlation of physical and chemical properties with atomic structure and periodic classification. Descriptive chemistry of the elements.

Not offered, 1960-61

Mr. Zwickel.

214. SPECIAL PROJECTS.

Individual work of an investigative nature which may include a search of chemical literature as well as laboratory work.

Staff.

215. HONORS COURSE.

Primarily for majors seeking departmental honors in chemistry. A laboratory research project.

Staff.

218a. NATURAL PRODUCTS.

Separation, characterization and proof of structure of biologically significant natural products. Methodology for the isolation and identification of these materials. Three lectures and three laboratory hours per week.

Mr. Nes.

218b. BIOCHEMISTRY.

Enzymatic reactions, biosynthesis, metabolism and energetics of biochemical reactions. Hormonal and other control of physiologic processes, vitamins, transport. Three lectures and three laboratory hours per week. Prerequisite: Chemistry 218a.

Mr. Nes

230a. PHYSICAL ORGANIC CHEMISTRY.

Fundamentals of organic chemistry. Molecular structure, acidity and basicity, kinetics and mechanisms with emphasis on the most recent advances in organic chemical theory.

Mr. Trachtenberg.

300. RESEARCH.

Staff.

321b. COLLOID CHEMISTRY.

Osmotic and sedimentation equilibrium. Diffusion, sedimentation velocity, countercurrent distribution and chromatographic theory. Offered in alternate years.

Mr. Kegeles.

322a. THERMODYNAMICS.

Applications of classical thermodynamics to chemical systems.

Mr. Kegeles.

323b. STATISTICAL MECHANICS.

Statistical mechanical analogs of thermodynamic functions and their application to chemical systems. Prerequisites: Chemistry 322a and 340a, or their equivalents.

Mr. Kalman.

324b. REFRACTOMETRIC TECHNIQUES.

Applications of refractometric and interferometric methods to the study of optically inhomogeneous media. Methodology employed in electrophoresis, ultracentrifugation, diffusion and chromatography. Offered in alternate years.

Mr. Kegeles.

331b. ADVANCED PHYSICAL ORGANIC CHEMISTRY.

Modern interpretation of organic reaction mechanisms including molecular rearrange-

ments, chain reactions and other reactions not covered in Chemistry 230a. Prerequisite: Chemistry 230a. Offered in alternate years. Mr. Trachtenberg.

333b. SYNTHETIC ORGANIC CHEMISTRY. Not offered, 1961-62.
Lectures on synthesis of organic molecules emphasizing scope and limitations of general methods, mechanisms and stereo-chemistry. Synthesis of carbon to carbon bonds, oxidation and reduction. Prerequisite: Chemistry 230a. Offered in alternate years. Mr. Trachtenberg.

340a. QUANTUM CHEMISTRY I.
Elementary quantum mechanics of simple systems, properties of wave functions, approximation methods for complex systems. Mr. Zwickel.

341b. QUANTUM CHEMISTRY II. Not offered, 1961-62.
Atomic and molecular systems, interaction between atoms. Prerequisite: Chemistry 340a. Offered in alternate years. Mr. Sugihara.

342b. NUCLEAR AND RADIOCHEMISTRY.
Fundamentals of nuclear science; production, isolation, identification and measurement of radioactive atoms. Prerequisite: Chemistry 340a or Chemistry 190b. Offered in alternate years. Mr. Sugihara.

350. SEMINAR.
Reports on research work and discussions of recently-published work. Guest Lecturers, Staff and Graduate Students.

360b. COORDINATION COMPOUNDS.
Chemical and physical properties of complexes, including theories of coordination, stereo-isomerism, reaction mechanisms and solution stabilities. Mr. Zwickel.

366a. INFRARED AND RAMAN SPECTROSCOPY. Not offered, 1961-62.
General theories of vibrational spectra and application of infrared and Raman spectra to structural determination. Offered in alternate years.

379b. SPECIAL TOPICS.
Research seminars; reports by graduate students.

380. RESEARCH CONFERENCE.
Informal reports of research work being done in the laboratory. Staff and Graduate Students.

390a. STEROID BIOCHEMISTRY.
Specialized course in the biochemistry of the steroids. Lectures and Laboratory. Double course credit. Mr. Nes, Staff and Guest Lecturers.

Classics

DEPARTMENT FACULTY

Claude W. Barlow, Ph.D., *Professor of Classics, Department Chairman*

UNDERGRADUATE PROGRAM

Undergraduate courses are provided for the acquisition of a reading knowledge of Greek and Latin and for the study of literary masterpieces in those original languages. Courses

Clark University

WORCESTER 10. MASSACHUSETTS

DEPARTMENT OF CLASSICS

February 6, 1962

Mrs. Colby, Registrar
Clark University

For your information, the words of the current catalog apparently mean that Latin 123b and Greek 123a together satisfy the requirement in literature (Group C), i.e. the Classics requirement for Group C majors.

Since this requirement has now been abolished, I have instructed Mr. Burgess to remove the words from the 1962 catalog.

The present words were inserted by the editor of the Catalog, and I never saw the copy, as I was away from Worcester for three months last summer.

Naturally, the English Department has never accepted these courses towards the English requirement, and such was never meant to be said.

Claude W. Barlow
Claude W. Barlow

are also offered for the candidate who wishes to major in Latin. The major should include Latin 13 during the freshman year, three advanced Latin courses and three courses in related fields to be approved by the department. Other courses, given entirely in English, deal with phases of the Greek and Roman civilizations. Students who wish to elect Elementary Greek or Intermediate Latin should consult the department as far in advance as possible since these courses are not offered every year.

COURSES

Greek

11. ELEMENTARY GREEK.

1960-61 or
Not offered, 1961-62.

Greek grammar through forms, syntax, vocabulary and reading; selections from Xenophon's *Anabasis* or other simple prose. Open to freshmen. Indivisible course. To be offered 1962-63.

12. ATTIC GREEK PROSE; HOMER'S *Iliad*.
Prerequisite: Greek 11.

1960-61 or
Not offered, 1961-62.

13. GREEK DRAMA.

Prerequisite: Greek 12 or the equivalent.

1960-61 or
Not offered, 1961-62.

123a. GREEK CIVILIZATION.

Lectures, readings and discussion on the history, literature, art, religion and government of ancient Greece, with emphasis on the elements which have contributed most to Western civilization. Greek 123a may be counted with Latin 123b to fulfill the general degree requirement in art and music (Group D) and literature (Group C) but not in fulfillment of the requirement in foreign language.

Mr. Barlow.

Latin

11. ELEMENTARY LATIN.

Not offered, 1961-62.

12. INTERMEDIATE LATIN; VIRGIL'S *Aeneid*.

Not offered, 1960-61

This course will begin with an intensive review of forms, syntax and vocabulary for at least seven weeks. Prerequisite: two years of secondary school Latin. Offered in alternate years.

Mr. Barlow.

13. CATULLUS AND PLAUTUS; TERENCE AND HORACE.

Prerequisite: Latin 12 or three years of secondary school Latin.

Mr. Barlow.

15. ROMAN HISTORIANS; POETS OF THE AUGUSTAN AGE.

Not offered, 1960-61

Prerequisite: Latin 13.

Mr. Barlow.

17. ROMAN SATIRE; VIRGIL'S *Aeneid VII-XII*.

Not offered 1961-62.

19. SURVEY OF LATIN LITERATURE.

Not offered 1961-62.

123b. ROMAN CIVILIZATION.

Lectures, readings and discussion on the history, literature, philosophy, art, religion, law and government of ancient Rome, with emphasis on the transmission of Greek civiliza-

tion and the condition of the Roman Empire during the early years of Christianity. Latin 123b may be counted with Greek 123a to fulfill the general degree requirement in art and music (Group D) and literature (Group C) but not in fulfillment of the requirement in foreign language. Given in English. Open to freshmen. Mr. Barlow.

Economics and Sociology

DEPARTMENT FACULTY

James A. Maxwell, Ph.D., *Professor of Economics, Department Chairman*

F. Eugene Melder, Ph.D., *Professor of Economics*

George E. Hargest, M.B.A., *Associate Professor of Economics and Business Administration*

Frederick W. Killian, LL.B., *Associate Professor of Sociology*

Howard W. Nicholson, Ph.D., *Associate Professor of Economics*

Roger C. Van Tassel, Ph.D., *Associate Professor of Economics*

George A. Balko Jr., M.B.A., *Assistant Professor of Business Administration*

Frederick E. Bamford, M.B.A., *Assistant Professor of Economics and Business Administration*

Philip G. Olson, Ph.D., *Assistant Professor of Sociology*

UNDERGRADUATE PROGRAM

The first aim of the department, in its undergraduate courses, is to give the student a comprehensive grasp of the underlying principles and functions of our economic and social institutions, and to develop habits of systematic and unbiased thought about these institutions. Some of the courses, however, contribute to the student's preparation for a business or professional career (Economics 13, 15, 22, 26, etc.) and are specifically recommended to students who are candidates for the degree of Bachelor of Science in Business Administration. Conversely, some students majoring in economics may be advised to elect certain courses in Business Administration which are credited toward the degree of Bachelor of Arts (Business Administration 100, 102, 120a, 121b, 150a, 160, 170b, 182b, 184, 252, 255b, 290).

Students who have an interest in Business Administration but prefer a program which is less intensive than that required of candidates for the degree of Bachelor of Science in Business Administration may enroll as candidates for the degree of Bachelor of Arts with a major in economics. Such students should take the normal college program. In the second year, they should elect Economics 11 and Business Administration 100. In the third and fourth years, they should select courses in economics and in business administration in consultation with their advisers.

Economics 11 is a prerequisite to all other courses in economics. Similarly, Sociology 11 is a prerequisite to other courses in sociology. Courses taken outside the department in partial fulfillment of the major requirement should be selected, subject to departmental approval, so as to provide a unified program centering about the student's major interest. Majors in economics will ordinarily be required to take Economics 205a, Intermediate Economic Theory.

PHILIP L. GAMBLE, Ph.D., VISITING LECTURER IN ECONOMICS, 1960-61

JOSEPH I. ROPER, B.Litt., VISITING PROFESSOR OF ECONOMICS, 1960-61

Candidates for departmental honors will engage in a program of independent study consisting of reading and research designed in part to give them specialized training in the fields of their major interest and in part to supplement formal courses. Ordinarily a candidate will begin his honors work in the second semester of the junior year by enrolling in the Honors Seminar.

Courses in sociology will be found listed, with descriptions, immediately after the list of courses in economics.

In making elections, students should bear in mind that some advanced courses are offered only in alternate years.

GRADUATE PROGRAM

The program for the degree of Master of Arts is worked out individually with each student.

For the degree of Doctor of Philosophy, which may be taken in Economics, each student must choose six fields of study to be agreed upon as early as possible in the first year of residence beyond the M.A. A range of courses is offered in cycles of two or three years. Individual work with instructors constitutes a considerable part of the program.

The classification of courses as undergraduate, intermediate, and graduate is an elastic one. Graduate students of economics should regard certain courses in business administration as part of the offerings of the Department of Economics and Sociology.

COURSES IN ECONOMICS

F11. PRINCIPLES OF ECONOMICS.

Indivisible course. Open to freshmen.

Mr. Van Tassel.

12b. ECONOMIC HISTORY OF WESTERN EUROPE SINCE 1700.

Not offered, 1961-62.

The course will treat the development of agriculture, industry, and commerce in Britain, France, and Germany.

Mr. Roper - 1960-61

13a. MONEY AND BANKING.

Mr. Maxwell.

103a - See next page

140b. CONSUMER ECONOMICS.

Theories of consumer choice making are analyzed. Rational planning and economy in important fields of consumers' decisions are explored. The role of government and private agencies in consumer education and protection are reviewed.

Mr. Melder.

15a. PUBLIC FINANCE.

The principles of governmental expenditures, revenues, and debts, with particular reference to the United States.

Mr. Maxwell.

BUSINESS ADMINISTRATION 100. ACCOUNTING.

BUSINESS ADMINISTRATION 102. INTERMEDIATE ACCOUNTING.

BUSINESS ADMINISTRATION 120a. CORPORATION FINANCE.

BUSINESS ADMINISTRATION 121b. INTRODUCTION TO INVESTMENTS.

BUSINESS ADMINISTRATION 150a. MARKETING.

BUSINESS ADMINISTRATION 160. BUSINESS STATISTICS.

BUSINESS ADMINISTRATION 170b. PRINCIPLES OF MANAGEMENT.

BUSINESS ADMINISTRATION 182b. PERSONNEL MANAGEMENT.

BUSINESS ADMINISTRATION 184. MANAGEMENT-LABOR RELATIONS.

200a. ECONOMIC GROWTH.

Analysis of economic growth theory, cultural, social and political factors making for growth. Factors within underdeveloped countries which hinder economic development will be examined. Mr. Melder.

200b. PROBLEMS IN ECONOMIC GROWTH.

The course examines some economic and social theories pertinent to economic growth. It then considers policy problems in two areas: acceleration of development rates in poorer countries and maintenance of growth in richer countries. Class members make studies of topics related to growth problems. Mr. Melder.

Numbered - 105a in 1961-62

205a. INTERMEDIATE ECONOMIC THEORY. - 1960-61

An analysis of contemporary price theory.

Mr. Van Tassel.

Given as a
year course,
International
Economics
in 1960-61

207a. INTERNATIONAL TRADE THEORY.

Emphasis is put on international value determination and the mechanisms for adjusting to international disequilibrium. Mr. Van Tassel.

207b. INTERNATIONAL ECONOMIC POLICY.

A review of the rise of the world trading economy, techniques of commercial policy, and major questions of international economic policy. Prerequisite: Economics 207a.

Mr. Van Tassel.

21a. BUSINESS CYCLES.

Analysis of recurrent business fluctuations differentiating the typical business cycle and its phases. Treatment of the history, theories of causation and proposals for control of the business cycle.

Not offered, 1961-62, 1960-61

21b. NATIONAL INCOME ANALYSIS.

A study of contemporary income theory.

Not offered, 1961-62

Mr. Van Tassel.

210a. ECONOMIC AND SOCIAL REFORM.

Not offered, 1961-62.

The development of economic institutions by society in its attempt to solve basic economic problems by free enterprise or planning. Attention is given to the contemporary industrial organization of the American economy.

211b. COMPARATIVE ECONOMIC SYSTEMS.

An analysis of contemporary or recently industrialized economic systems such as capitalism, socialism, and fascism, followed by a consideration of these systems as currently or recently found to exist in specific nations.

~~Not offered, 1961-62~~

Mr. Roper, 1960-61

Mr. Melder, 1961-62

22a. LABOR ECONOMICS.

A survey of the nature of labor economics and labor problems, including the several approaches of organized workers and employers to these problems. Mr. Melder.

22b. LABOR ECONOMICS.

Applications of economic analysis to wages, unemployment, and related issues. The ap-

proach of government to labor force problems, including industrial relations and social insurance. Mr. Melder.

23b. PROBLEMS IN MONEY AND BANKING.

Central banks, particularly the Federal Reserve System; monetary standards; theories of foreign exchange; monetary policy in the United States. Prerequisite: Economics 13a or its equivalent. Mr. Maxwell.

Not offered, 1960-61

231. ECONOMIC HISTORY OF THE UNITED STATES.

Not offered, 1961-62. or

24a. HISTORY OF ECONOMIC DOCTRINE.

After a quick survey of ancient writers, attention will be given to mercantilism and the doctrinal reaction from it as expressed by the Physiocrats and the Classical economists. Mr. Maxwell

Not offered, 1961-62.

25b. PROBLEMS IN PUBLIC FINANCE.

The Employment Act of 1946 is discussed and methods by which it may be implemented. Other questions examined are: reform of the federal income taxation and death duties, federal debt policy, the capital budget, federal budgetary procedure. Mr. Maxwell.

Not offered, 1960-61

26. INDUSTRIAL ORGANIZATION AND GOVERNMENTAL CONTROL.

Examination of the various forms of governmental regulation applied to our present industrial organization. Appraisal of existing governmental controls in specific industrial situations. Conducted on a seminar basis. Mr. Nicholson.

27b. INTRODUCTION TO MATHEMATICAL ECONOMICS.

An introductory survey of the use of mathematical methods in economic analysis. Special attention is given to the mathematical framework of the theory of price determination. Some attention will be given to special topics such as game theory and linear programming. Prerequisite: Mathematics 12 Calculus. Admission subject to consent of the instructor. Mr. Nicholson.

Not offered, 1960-61

28. ~~RESEARCH IN SELECTED ECONOMIC PROBLEMS.~~ Honors Seminar - Seniors

Staff.

280b. HONORS SEMINAR. - Juniors

Designed to assist honors candidates in integration of the field. Prerequisite for honors. Staff.

29a. STATISTICAL METHOD. (Offered in 2nd sem. - "b" course, 1960-61)

The nature of statistics; statistical description; statistical inference; special topics. Special emphasis will be given to theoretical and observed frequency distributions, elements of probability theory, problems of sample design and interpretation, decision theory, time series, index numbers, and measures of association and correlation. Mr. Nicholson.

Ordinarily required of all majors in Economics. With the approval of the Director of the Division of Business Administration, this half course may be substituted for B.A. 160, Business Statistics, by candidates for the degree of Bachelor of Science in Business Administration.

BUSINESS ADMINISTRATION 252. MARKETING RESEARCH.

BUSINESS ADMINISTRATION 255b. MARKETING POLICIES.

BUSINESS ADMINISTRATION 290. ANALYSIS OF BUSINESS PROBLEMS.

39a. ECONOMIC THEORY.

Analysis of the theories of representative economists. Most attention is given to Marshall, Chamberlin, Keynes. Mr. Maxwell.

311. SEMINAR.

Staff.

370b. PROBLEMS IN QUANTITATIVE ECONOMICS.

Study of the application of mathematical and statistical techniques to economic problems. Mr. Nicholson.

300.	READING	}	IN ECONOMIC GROWTH.	Mr. Melder.
30.	THESIS			
313.	READING	}	IN MONEY AND BANKING.	Mr. Maxwell.
31.	THESIS			
322.	READING	}	IN LABOR.	Mr. Melder.
32.	THESIS			
324.	READING	}	IN MARKETING.	Mr. Balko.
33.	THESIS			
325.	READING	}	IN PUBLIC FINANCE AND FISCAL POLICY.	Mr. Maxwell.
34.	THESIS			
326.	READING	}	IN BUSINESS ORGANIZATION AND GOVERNMENT CONTROL OF INDUSTRY.	Mr. Nicholson.
35.	THESIS			
327.	READING	}	IN INTERNATIONAL ECONOMICS.	Mr. Van Tassel.
36.	THESIS			
329.	READING	}	IN STATISTICAL METHODS.	Mr. Nicholson.
37.	THESIS			
334.	READING	}	IN HISTORY OF ECONOMIC THOUGHT.	Mr. Maxwell.
38.	THESIS			
339.	READING	}	IN ECONOMIC THEORY.	Mr. Maxwell.
320.	THESIS			

Sociology

UNDERGRADUATE PROGRAM

An undergraduate whose primary interest is in sociology may meet the department requirement for a major by completing Economics 11 and three or four courses in sociology together with two or three approved courses in related departments. Related courses require departmental approval and must be discussed with advisers each registration day.

GRADUATE PROGRAM

A range of courses sufficient for the needs of candidates for the master's degree only is offered. Individual work with instructors and small intimate seminars constitute a goodly part of the graduate student's program.

Clark University


INTERDEPARTMENT COMMUNICATION

TO: Mrs. Colby

FROM: Mr. Killian

DATE: October 19, 1961

For the record, Soc. 12a, Introduction to Anthropology, is not equivalent to Soc. E 12, Peoples of the World, given in the Evening College by Dr. Morris. Both may be taken by a student for credit. One does not eliminate the other.


Frederick W. Killian

COURSES IN SOCIOLOGY

F11. INTRODUCTORY SOCIOLOGY: PRINCIPLES. FIRST SEMESTER.

The development of man's world—the social, the normative, structure and function, some fallacies in sociological thinking, social action and interaction, social change and planning. Prerequisite for further work in Sociology unless otherwise stated.

Mr. Killian.

F11. INTRODUCTORY SOCIOLOGY: SOCIAL INSTITUTIONS. SECOND SEMESTER.

The place and function of institutions in Western Society. The components of institutions; institutional processes. The development of the major social institutions—family, kinship, subsistence, education, law, religion, politics. Person, self, and institutions. Social control and change. Prerequisite for further work in Sociology unless otherwise stated. Divisible but first semester required for admission in second semester.

Mr. Killian.

12a. INTRODUCTION TO ANTHROPOLOGY.

Not offered, 1960-61

The evolution of man as a biological organism and the development of man's distinguishing feature: culture. The assessment of paleontological and archaeological evidence in an attempt to reconstruct the evolution of man and his culture. The use of comparative anatomy and genetics in understanding human evolution; a survey of existing theories of evolution. The reconstruction of human culture from the stone age to the Christian era: emphasis placed largely on the Middle East, Egypt, Crete, Mesopotamia, and Europe. (To be followed at intervals by a course in Primitive Cultures.) Prerequisite: Sociology 11 or Economics 11 or consent of the instructor.

Mr. Olson.

13b. INDIVIDUAL AND SOCIAL STRUCTURE.

Not offered, 1960-61

An examination of the social contexts out of which personality types emerge; the development of the social mind and self; theories of interpersonal behavior and the presentation of self; the relation between individual behavior and social structures. An analysis of the role of history, society, and psychological factors in the development of personal identity and other components of the self, including anxiety, social personality, and character. The readings will emphasize both primitive society and the modern Western world. Prerequisite: Sociology 11.

Mr. Olson.

21b. SOCIOLOGICAL ANALYSIS.

Not offered, 1960-61

The philosophical and logical premises underlying the collection and interpretation of empirical data and the extension of these to sociological contexts. A brief survey of the major styles of quantitative social investigation will be made: research design, survey analysis, logic of quantitative measurement techniques, and the questionnaire. Somewhat more time will be spent on community study and participant-observer techniques with an attempt to relate the qualitative data which come from these styles to quantitative data. The emphasis will be on understanding the social world by combining and interpreting the utility and fallacies of investigatory styles. Prerequisite: Sociology 11.

Mr. Olson.

24a. AMERICAN COMMUNITY STRUCTURE.

Not offered, 1960-61

An analysis of community studies as the basis for understanding society, with particular reference to American society. The community as a form of social organization with psychological, political, and economic underpinnings. The rise of centralized institutions and the transformation of community in twentieth century America: the links between community social structure and the total society. The historical decline of community

and the emergence of pseudo-communities. The course will focus on a comparative analysis of the major American community studies. Prerequisite: Sociology 11. Mr. Olson.

25. LAW AND SOCIETY. LAW AND THE SOCIAL ORDER.

Not offered, 1960-61

First Semester: development of Western legal institutions; the normative content and analysis of legal institutions and law; relations to religious institutions; the legal tradition in Western society; law as a means of social control; law and its functions in modern times; the changing basis of legality: premises concerning man and his world in relation to law and its function. Sociology, anthropology and law. Selected readings in theory and analysis of case materials. Prerequisite: Sociology 11, or consent of the instructor.

Mr. Killian.

Second Semester: Social Control, Policy and the Problem Situation in Law; The impingement of law on the major institutions; on the problems of our time; law and politics; law and economics; law, business, and industry; law and the criminal offender; civil rights and law; law and educational policy; law and religious freedom. How these problems are dealt with in the courts and by legislation as interpreted by courts. Procedural and substantive revisions in law. Prerequisite: Sociology 11, or consent of the instructor.

Divisibles; First semester required for admission in second semester.

Mr. Killian.

25b Legal Institutions Offered, 1960-61

Mr. Killian

26b. COMPLEX SOCIAL ORGANIZATIONS.

The dominant types of complex social organizations in American society will be examined in an attempt to understand both their structure and dynamics; bureaucracy, industrialization, mass society, urbanization, the military, and the state. Detailed analyses of at least two of these organizational types will be made each semester the course is offered. Emphasis will be placed on the variability in human organizations: the wide range of types which man invents for accomplishing certain tasks. The complexities of organizations will be analyzed for their relationships to the total society. Prerequisite: Sociology 11.

Mr. Olson.

29a Social Theory Offered, 1960-61

Mr. Killian

29a. HISTORY OF SOCIAL THOUGHT.

The history of man's ideas about social life; the great social thinkers from the Greeks to the 19th century experience in Europe and the United States. Prerequisite: Sociology 11, 21, or consent of the instructor. Required for majors.

Mr. Killian.

29b. INTRODUCTION TO SOCIOLOGICAL THEORY.

Twentieth century Sociology in Europe and America is characterized and analyzed. The main categories and movements will be discussed. Selected readings are assigned from original sources—Spencer, Sumner, Weber, Durkheim, MacIver, Parsons, Merton, and others. An extensive paper will be required. Prerequisite: Sociology 11, 21, 29a, or consent of the instructor. Required for majors.

Mr. Killian.

28-38. STUDY AND RESEARCH IN SELECTED FIELDS.

Reading courses, honors work, graduate students.

Staff.

Education

DEPARTMENT FACULTY

Vernon Jones, Ph.D., *Professor of Educational Psychology, Department Chairman*

Henry C. Borger Jr., Ph.D., *Professor of Education*

James M. Coffee, Ed.D., *Associate Professor of Education*

Warren D. Gribbons, Ed.D., *Assistant Professor of Education*

Dayton D. Shepherd, M.A., *Lecturer in Education*

M. Evelyn Harriman, M.A. in Ed., *Lecturer in Education*

With the cooperation of Professor Warman of the Graduate School of Geography, Professor Beck of the Department of Philosophy, and Miss Hughes, Dean of Women.

The Department has as its primary objective the providing of cultural and professional study for teachers and prospective teachers in elementary and secondary schools and academies. It offers introductory courses in education for all students of junior standing or above who may be interested in teaching, and integrated programs of training at both the elementary and high school levels.

UNDERGRADUATE PROGRAM

The department encourages all students who may be interested in preparing for teaching to consult with some member of its staff as early in their careers at the university as convenient. The actual election of courses in education, however, should be postponed until the junior year. During the first two years, students should complete as many of the specific requirements for the degree of Bachelor of Arts as possible, and lay a broad foundation of scholarship in the subjects in which they wish to teach.

In conformity with its policy of emphasizing the importance of scholarly background in the preparation of teachers, the department offers its courses as electives, and not as an undergraduate major. This means that the students preparing to teach should elect their majors with careful attention to extensive preparation in areas in which they wish to teach.

Education courses at the undergraduate level are offered primarily with three purposes in mind: (1) to provide introductory instruction to students who plan to teach in secondary schools and academies, and who, in preparation for such teaching, plan a fifth year of study leading to the degree of Master of Arts in Education; (2) to provide an integrated program of courses and internship teaching to students who, immediately upon graduation, wish to teach in elementary schools; (3) to offer certain introductory courses in education to students who have not definitely decided upon teaching as a career but who desire some acquaintance with the problems of the field.

For students desiring to enter elementary school teaching immediately upon receiving their undergraduate degree, a program has been evolved, in cooperation with the faculty, whereby the election of up to 18 semester hours in education may be possible, including internship teaching in the first semester of the senior year. Since the amount of professional work in education forms so large a percentage of the program of study of such students in the junior and senior years, it is obvious that careful planning must be done throughout the college course to have the desired number of electives available for work in education in these last two years.

GRADUATE PROGRAM

For students wishing to prepare for teaching in secondary schools and academies the department recommends high concentration in the undergraduate program upon the subject-matter fields in which they wish to teach, and suggests that they reserve for a fifth

year most of the professional work in the theory and practice of teaching. A fifth-year program leading to the degree of Master of Arts in Education is offered by the department with majors available in elementary and secondary teaching. The program includes additional work in the student's subject-matter field, professional courses in education, and supervised internship teaching in secondary schools. The master's degree is more and more being required of new appointees in high schools and is usually rewarded by a higher level of remuneration. To assist high ranking students who find the one year of full time graduate work difficult to finance, the department has a limited number of scholarships available to assist with tuition costs.

Requirements. The requirements for the degree of Master of Arts in Education cannot be adequately stated in terms of courses to be taken, because the evaluation of the work of each student will be made on the basis of achievement rather than on the basis of courses completed. However, the minimum essentials in terms of course requirements are outlined below.

Course requirements. The student is expected to elect one of the following groups of studies as the field in which he wishes to teach:

- (a) Mathematics and natural sciences.
- (b) History, geography, and economics.
- (c) Ancient and modern foreign languages.
- (d) English, alone or in combination with some related subject.

Prior to receiving the degree, the candidate must have completed in undergraduate and graduate study combined not less than five year-courses in one of the above groups, or in a combination of groups approved by the Department of Education. At least two semester-courses in a subject-matter field must be taken as a part of the study in residence for the advanced degree and must be passed with a grade of B— or better for graduate credit. In addition to the above requirement in the subject-matter field, eight semester-courses of graduate work in education will normally be required. The program of courses to meet these requirements must be approved in advance by the department. Changes in the proportion of education and subject-matter courses may be made by the department on the basis of the candidate's previous training. Work, additional to the above requirements, either in the subject-matter field or in education, or both, may be required if this seems necessary for the adequate preparation of the candidate.

Internship Teaching. The department provides opportunities for internship teaching under supervision for all graduate students majoring in education. For graduate students of the department who have not had teaching experience, satisfactory work in internship teaching is a requirement for the degree of Master of Arts in Education.

Thesis or Additional Study in Lieu of Thesis. All candidates for the degree of Master of Arts in Education must choose one of the following plans:

- (a) Prepare an acceptable thesis or special report.
- (b) Elect, in lieu of thesis, two additional semester courses in subject-matter fields (making a total of at least four-semester courses in subject-matter area). This plan will apply primarily to experienced teachers and particularly to those doing much of their study in the summer sessions.
- (c) Elect, in lieu of thesis, a two-semester or double seminar in which intensive work will be required in preparing and presenting reports before fellow graduate students and the staff.

Final oral examination. The passing of a final oral examination will be required of all candidates.

COURSES

100a. INTRODUCTION TO EDUCATION.

This course is designed to introduce the student to the historical, social, political, and economic forces that affect the American educational system. Current educational trends and issues will be studied. Open only to juniors and seniors.

Mr. Gribbons.

201a. EDUCATIONAL PSYCHOLOGY: CHILD GROWTH AND DEVELOPMENT.

Principles basic to the understanding of children with special attention to emotional and social development and learning in the elementary school years.

Mr. Gribbons.

207b. USE OF AUDIO-VISUAL MATERIALS IN TEACHING.

Principles and practices in the use of visual and auditory material and community resources in teaching. Extra work required for undergraduates. Laboratory work required and a fee of \$8.00 charged for material.

Mr. Borger.

210a. EDUCATIONAL PSYCHOLOGY, ADVANCED: PSYCHOLOGICAL APPROACH TO CITIZENSHIP DEVELOPMENT.

A study and evaluation of the theoretical formulations and experimental evidence on the problem of values as they relate to character and citizenship development among children and adolescents. Extra work required of undergraduates.

Mr. Jones.

215a. INTERNSHIP TEACHING IN THE ELEMENTARY SCHOOL.

An extended period of observation and practice in teaching under supervision in regularly organized classes in elementary school. Each student is assigned to a supervising teacher, under whom he or she works for a minimum of ten hours per week for the first semester. The first week of this period is normally devoted to observation; the remainder of the time to teaching, under supervision. Lesson planning, pupil evaluation, and playground supervision are part of the requirements of each student.

Mr. Jones, Mr. Gribbons, Mrs. Harriman and Supervising Teachers.

20b. (GEOGRAPHY 20b.) GEOGRAPHY IN EDUCATION.

Not offered, 1961-62

Geography in the present-day American schools. The course is designed to meet the needs of those expecting to teach geography. Extra work required of undergraduates.

Mr. Warman.

27b. PRINCIPLES OF SCHOOL AND RECREATIONAL LEADERSHIP.

Not offered, 1960-61

The basic concepts and techniques of educational and recreational leadership. Lectures, readings, discussions, and field work. Permission of the instructor required for registration. Extra work required of undergraduates.

Miss Hughes.

263a. METHODS AND MATERIALS IN TEACHING OF LANGUAGE ARTS IN THE ELEMENTARY SCHOOL.

Methods and materials in the teaching of the language arts, in the middle grades, with special reference to reading. Particular emphasis will be given to provision for individual differences in teaching, and to the development of independent study skills. Field trips to selected schools will be arranged. Extra work required of undergraduates.

Mr. Shepherd.

260b. CURRICULUM DEVELOPMENT IN ELEMENTARY EDUCATION.

A study of the most essential materials and methods in elementary school instruction. Special attention will be given to the methods of teaching and learning in the social studies and mathematics, with brief units on the methods of cooperating most effectively with special teachers in the arts. Lectures and demonstrations by visiting specialists will be provided on particular topics, and field trips will be arranged for classroom demonstrations of certain principles and procedures. Extra work required of undergraduates.

Mr. Shepherd.

270. (ROMANCE LANGUAGES 270) THE TEACHING OF ROMANCE LANGUAGES. *New course*
A practicum course for Teaching Assistant Scholars serving as Interns in the Department of Romance Languages. This course will include a weekly lecture and readings, to provide a basis in the theory of applied linguistics; directed teaching in language courses; and a monthly seminar for discussion of the relations between theory and practice.

Not offered, 1960-61

Mr. Reid and Staff.

290b. PHILOSOPHY OF EDUCATION.

The aims, processes and materials of education with special reference to the influence of philosophical ideas on educational problems. Extra work required of undergraduates.

Not offered 1960-61

Mr. Beck.

301b. EDUCATIONAL PSYCHOLOGY: ADOLESCENT GROWTH AND DEVELOPMENT.

Psychological principles as they bear upon learning and other problems of education with special reference to the growth and development of youth of secondary school age.

Mr. Jones.

303b. CURRICULUM DEVELOPMENT IN SECONDARY EDUCATION.

The historical background, basic issues, principles, and procedures of curriculum organization and development in secondary schools.

Mr. Gribbons.

308a. METHODS AND MATERIALS IN SECONDARY EDUCATION.

Methods and techniques used by the teacher in high school teaching, and a survey of materials available.

Mr. Borger.

309b. SOCIAL LEARNING IN RELATION TO TEACHING AND COUNSELING.

The purpose of this course is to consider concepts of learning which contribute to an understanding of the development of social behavior. Principles of learning and teaching from the fields of social psychology and sociology will be studied within the context of the social environment.

Mr. Coffee.

310b. CITIZENSHIP DEVELOPMENT: SEMINAR IN METHODS AND MATERIALS.

A study of procedures and programs in character and citizenship education in the schools. Attention will be given not only to curricular and co-curricular activities in the schools but also to the inter-relations between the school and other institutions and agencies in the community as they relate to the development of values and conduct in youth.

(Not offered, 1960-61 or 1961-62) Mr. Jones.

311a. PRINCIPLES, PRACTICES, AND ORGANIZATION OF GUIDANCE.

A survey of guidance and personnel work. Principles bearing upon guidance and student personnel practices will be developed. Aspects of related fields will be reviewed sufficiently to indicate the scope and content of guidance and personnel work. The problem of organizing and administering a guidance program will form an important part of this course.

Mr. Coffee.

312a. GUIDANCE: COUNSELING.

Emphasis in this course will be upon the theory and methodology of counseling and upon the management of typical counseling problems. The diagnosis and referral of behavior disorders and related personality maladjustments will be considered. Case material will be presented and analyzed. (311a must be taken simultaneously or have been taken previously.)

Mr. Coffee.

312b. GUIDANCE: OCCUPATIONAL INFORMATION AND PLACEMENT.

The first part of this course will contain instruction and training in the use of occupational information in vocational guidance along with a consideration of the psychological and sociological factors related to occupational choice and job satisfaction. The second part will emphasize the organization of the placement service.

Mr. Coffee.

313b. PERSONALITY ASSESSMENT IN GUIDANCE.

Lectures and demonstrations of techniques used to assess personality. Students will study critically a variety of evaluating methods and analyze the results.

Mr. Gribbons.

314a. TESTS AND EVALUATION: MEASUREMENT OF ABILITY AND ACHIEVEMENT.

The methods and problems involved in the evaluation of abilities and accomplishments of children and youth. Attention will be given both to standardized instruments and to teacher-made tests of achievement.

Mr. Jones.

314b. TESTS AND EVALUATION: ADVANCED PROBLEMS.

The measurement and evaluation of aptitudes, interests, attitudes, and personality with special attention to the problems of reliability of measurement and the possibilities of the use of such measures in teaching and counseling.

Mr. Jones.

315a. INTERNSHIP TEACHING IN THE SECONDARY SCHOOL.

An extensive period of observation and teaching in the field or fields in which the student plans to teach in secondary school. Individual supervision is given by the department and by critic teachers in cooperating schools.

Mr. Jones, Mr. Gribbons and Supervising Teachers.

322b. PRACTICUM IN GUIDANCE.

Supervised field work, reading, reports, and discussions. Prerequisite: 310a.

Mr. Gribbons.

350. RESEARCH IN EDUCATION.

Individual direction of students in their research projects.

Staff.

380b. DEPARTMENTAL SEMINARS ON CURRENT PROBLEMS.

Staff and Graduate Students.

English

DEPARTMENT FACULTY

Karl O. E. Anderson, Ph.D., *Professor of English, Department Chairman*

James F. Beard, Ph.D., *Associate Professor of English*

William H. Carter Jr., Ph.D., *Associate Professor of English*

Jessie C. Cunningham, A.M., *Assistant Professor of English*

Stanley Sultan, Ph.D., *Assistant Professor of English*

Katherine B. Gates, Ph.D., *Instructor in English*

Edward H. Hastings, A.M., *Instructor in English*

Neil R. Schroeder, A.B., *Instructor in Public Speaking*

UNDERGRADUATE PROGRAM

All freshmen except those exempted on the basis of the Advanced Placement Test in English, must take both semesters of English 11. Students exempted from English 11 must take another English course in place of English 11. To fulfill the requirement of a third semester of English, students may take any English course beyond English 11 with the exception of English 12.

A major in English consists of a minimum of seven courses in addition to English 11, as follows:

1. English 13. Normally this course should be taken in the sophomore year. *For English majors*, English 13 is prerequisite to any of the following courses: 101b, 104, 105, 110, 113, 117a, 122b, 130a, 146b, and 150b.
2. English 150b and three other half-courses in English from a group of courses open only to juniors and seniors, namely: 101b, 104, 105, 110, 113, 117a, 122b, 130a, and 146b.
3. Two additional half-courses in English.
4. Three courses in allied fields: General Education 14; a year course in philosophy (preferably Philosophy 12); and one other course approved by the Department of English, preferably from the following list: Fine Arts 11, General Education 115, General Education 143, French 113, German 141, Greek 123a, History 12, History 230, Latin 123b, and Music 12.

An Honors candidate must take a minimum of six courses in English.

COURSES

11. COMPOSITION AND LITERATURE.

English 11 aims (1) to improve the student's composition through a review of the principles of good writing, frequent themes, and individual conferences and (2) to teach him, through the techniques of close reading, to understand and evaluate literature. Open to freshmen. Staff.

12a. ~~Speech~~ Public Speaking (12b - course repeated in 2nd sem.)

A fundamental course in speech, including training and practice in voice production, diction, articulation, and the basic types of speech. Drill sessions and recordings help the student recognize and correct his speech deficiencies. Practice in public speaking includes practical experience in the most common types of speeches. Open to freshmen. Permission of the instructor required. Mr. Schroeder.

13. ~~English~~ POETRY. (1961-62) "Intro. to Poetry," 1960-61

English 13 is designed to provide over the year an introduction to the various kinds of poetry, seen in relation to their historical development and considered in terms of form and technique, as well as content. During the first semester representative poems from the various literary periods are studied in an effort to provide an historical framework; during the second semester the emphasis is focussed more sharply on the different kinds of poetry and on special problems. Mr. Carter.

14. ENGLISH NOVEL.

A study of the English novel from its beginning to the end of the nineteenth century. The first semester includes Defoe, Richardson, Fielding, Smollett, Sterne, Jane Austen, and three or four minor novelists. The second semester considers Scott, Thackeray, {1960-61 or Not offered, 1961-62.

Dickens, George Eliot, Hardy, Conrad, and three or four minor novelists. Some emphasis is placed on the development of the novel as a literary form. Offered in alternate years.

Mrs. Cunningham.

15. ~~ENGLISH~~ DRAMA. (1961-62)

Not offered, 1960-61

A course in theatrical techniques and the literature of the major periods of drama in the English language. The first semester covers the religious drama of the Middle Ages and the drama of Tudor, Stuart, and Restoration England, including plays by Marlowe, Shakespeare, Jonson, Beaumont and Fletcher, Dryden, Congreve, and Wycherley. The second semester covers eighteenth and nineteenth century English drama and the modern drama of England, Ireland, and the United States. Included are plays by Sheridan, Goldsmith, Wilde, Shaw, Synge, Yeats, O'Casey, and O'Neill. Offered in alternate years.

First semester: Mr. Schroeder.

Second semester: Mr. Sultan.

16a. CREATIVE WRITING.

A course designed to cultivate and guide student work in the short story, the lyric poem, and the informal essay. Class meetings deal largely with important aspects of the art of fiction; published literary works and student manuscripts are discussed. Requirement: a one-semester course in literature, which may be taken concurrently. Permission of the instructor required.

Mr. Sultan.

19b. INTERMEDIATE COMPOSITION.

Further training in the basic principles of composition. Attention is given to word choice, sentence and paragraph structure, and organization. Exposition is emphasized. Individual conferences. (Offered by Mr. Haber in 1960-61)

Mrs. Cunningham.

101b. CHAUCER.

Not offered, 1961-62.

After a careful study of the Prologue to the *Canterbury Tales* to acquaint the student with the essentials of Middle English vocabulary, grammar, and scansion, most of the *Canterbury Tales* and all of *Troilus and Cressida* are read more rapidly. The emphasis throughout is on Chaucer's literary skill and breadth of vision. Offered in alternate years.

Mr. Anderson.

104. English Literature of
~~Milton and~~ THE SEVENTEENTH CENTURY.

Not offered, 1960-61

The first semester is devoted to a study of seventeenth century English literature exclusive of Milton and the Restoration Drama; that is, metaphysical poets (Donne, Herbert, Vaughan); the seventeenth century lyric (Jonson, Herrick, Crashaw, Marvell); prose works by Bacon, Burton, Browne, Walton, Bunyan, Pepys, and Evelyn; and in general, the rise of neo-classicism (Jonson, Hobbes, Dryden). The second semester considers in some detail the works of Milton and the Restoration Drama (Dryden, Etherege, Wycherley, Congreve, Farquhar). Offered in alternate years.

Mr. Carter.

105. EIGHTEENTH CENTURY.

Not offered, 1961-62.

During the first semester, prose works such as Defoe's *Moll Flanders* and Swift's *Gulliver's Travels*, plays such as Gay's *Beggar's Opera* and Lillo's *London Merchant*, and the major poems of Pope and Swift are considered. During the second semester, prose works by Boswell and Johnson; novels by Richardson, Fielding, Smollet, Sterne; plays by Fielding, Goldsmith, Sheridan; and poetry by Thomson, Collins, Gray, Burns, and Blake are studied. Offered in alternate years.

Mr. Carter.

102a. CONCEPT OF TRAGEDY

NOT OFFERED, 1960-61

MR. ANDERSON

110. VICTORIAN LITERATURE.

In the first semester, selections from the more important British prose writers of the Victorian period are examined both for their contemporaneous significance and for their insights into problems which concern the modern mind. Authors studied include Mill, Carlyle, Ruskin, Arnold, Newman, Morris, Pater, and Stevenson. In the second semester, British Victorian poets are studied in the perspective of their immediate aesthetic and intellectual backgrounds and in terms of more recent critical attitudes and standards. Tennyson, Browning, Rossetti, Swinburne, Hopkins, Hardy, Housman, and Yeats are among the authors read. Offered in alternate years. Mr. Beard.

111. AMERICAN LITERATURE.

Through study of representative masterworks, the course traces the main currents of American literature from Puritan times to the present. Authors read during the first semester include Sewall, Edwards, Franklin, Cooper, Poe, Hawthorne, Thoreau, Emerson, Melville, and Whitman; during the second semester, Twain, Howells, Dickinson, Adams, Crane, James, Frost, Eliot, Faulkner, and Hemingway. Offered in alternate years. Not offered, 1961-62.

Mr. Beard.

113. SHAKESPEARE (AND THE ELIZABETHAN DRAMA.)

Approximately twenty plays, with supplementary critical essays, are read through the year as a basis for a study of Shakespeare's development as a dramatist, his changing attitude toward life, and his relation to other important Elizabethan dramatists. The second semester is devoted mainly to a careful analysis of *Hamlet*, *Othello*, *Lear*, *Macbeth*, and *Antony and Cleopatra*. Offered in alternate years. Not offered, 1960-61.

Mr. Anderson.

117b. LITERATURE OF THE ROMANTIC PERIOD.

The course examines the currents of thought and feeling known as Romanticism through readings in prose and poetry of such writers as Blake, Wordsworth, Scott, Coleridge, Byron, Shelley, and Keats. Emphasis is given to the implications, aesthetic and otherwise, of Romantic ideas and attitudes. Offered in alternate years. Offered in 2nd sem. 1960-61.

Mr. Beard.

122b. MODERN POETRY.

A course in English poetry during the forty-year period from the First World War to the death of Dylan Thomas and Wallace Stevens, with brief consideration of the precursors of the period. W. B. Yeats, Ezra Pound, T. S. Eliot, W. H. Auden, Robert Frost, Wallace Stevens, and Dylan Thomas are the principal poets studied. Offered in alternate years. Not offered, 1960-61.

Mr. Sultan.

127b. MODERN CONTINENTAL DRAMA.

A survey of European drama from Ibsen to the present. The writers studied include Ibsen, Strindberg, Chekhov, Hauptmann, Maeterlinck, Pirandello, and Copek. Offered in alternate years. Not offered, 1961-62, 1966-67.

130a. ENGLISH SEMINAR.

This seminar is devoted to the intensive study of a special subject or a small group of writers. It is limited to advanced students who are capable of independent work. Permission of the instructor is required.

Topic for 1960-61: Faulkner and Hemingway. - #130b

Topic for 1961-62: The Concept of Tragedy. - numbered 102a

Through the close study of fifteen plays and three novels from the Middle Ages to the

120b INTRO. TO LITERARY CRITICISM

NOT OFFERED, 1961-62

MR. CARTER

142 HISTORY OF THE NOVEL

NOT OFFERED, 1961-62

MRS. CUNNINGHAM

126b MODERN BRITISH & AMERICAN DRAMA

NOT OFFERED, 1961-62

MR. SULTAN

present, the Concept of Tragedy analyzes the nature of tragedy, the changes which this concept has undergone in the last five hundred years, the relation of these changes to shifting views of man and the universe, and the significance of the study of tragedy to us today.

Mr. Anderson.

143a. MODERN BRITISH FICTION.

The course deals primarily with the work of the four major British writers of fiction during the twentieth century: Joseph Conrad, D. H. Lawrence, Virginia Woolf, and James Joyce. Offered in alternate years.

Mr. Sultan.

144b. CONTEMPORARY AMERICAN FICTION.

Not offered, 1960-61

A critical introduction to the best American fiction since about 1900, with emphasis on its aesthetic values, sociological insights, and philosophical implications. Authors read include Dreiser, James, Anderson, Fitzgerald, Hemingway, Wolfe, Faulkner, and Mailer. Offered in alternate years.

Mr. Beard.

146b. INTRODUCTION TO LITERARY CRITICISM.

Not offered, 1961-62.

This course involves the discussion of a selection of critics, from Aristotle to the present, who have been particularly influential in English and American literature. Offered in alternate years.

Mr. Carter.

150b. SENIOR SURVEY.

This seminar seeks to help the senior major integrate his other English courses and to fill in any significant gaps in his English program. The reports and discussions trace, from early writing to the present, such concepts as Classicism, Romanticism, Realism and Naturalism, Tragedy, Comedy, Satire, and Humanism. Required of departmental majors.

Mr. Anderson.

Fine Arts DEPARTMENT FACULTY

Samuel P. Cowardin, M.A., *Assistant Professor of Fine Arts*

Sante Graziani, M.F.A., *Associate Professor (affiliate) of Fine Arts*

Rev. Thaddeus Clapp } and sem. only, 1961-62

William J. Brown

UNDERGRADUATE PROGRAM

The major in fine arts is offered jointly by Clark University and the School of the Worcester Art Museum. The program consists of 13 courses taken at Clark and seven courses at the museum school. Fine Arts 11 and General Education 14 are required among the university courses.

Candidates for admission who wish to major in fine arts must submit, with their application form, a portfolio of about a dozen representative pieces of their work in drawing, painting, design, etc. Each piece should be clearly marked with the candidate's name and home address.

COURSES

11. INTRODUCTION TO WESTERN ART.

Lectures during the first four weeks deal with general topics, such as design principles and technical procedures. The remainder of the course treats significant works of architecture, sculpture and painting in the light of their times. New students will not be admitted in the second semester.

1st sem. - Mr. Cowardin.

2nd sem - Mr. Clapp

111. BASIC DRAWING AND PAINTING.

Introduction to the drawing and painting of objects in the field of vision; theory and practice in the statement of line, form and light and shade; study of the nature and use of materials and instruments; exercises from objects and from living models; observation of method and accomplishment found in the museum's collections. Nine hours of studio work a week at the museum school. Indivisible course. Mr. Graziani, Miss Murphy.

12b. SURVEY OF WESTERN PAINTING.

General problems of pictorial expression are treated as well as the historical aspects of style. The course may not be counted in addition to Fine Arts 11. Not offered, 1961-62

15. ART OF THE RENAISSANCE IN ITALY.

1st sem. only, 1961-62

Mr. Cowardin.

16. ART OF THE SEVENTEENTH AND EIGHTEENTH CENTURIES.

Not offered, 1961-62.

191a. ART OF THE ~~ANCIENT~~ NEAR EAST AND INDIA.

Mr. Cowardin.

192a. ART OF CHINA AND JAPAN.

Not offered, 1961-62.

199. ADVANCED PAINTING AND DESIGN.

General designation for all courses at the museum school above the elementary level. Ordinarily open only to majors in the practice of art. Staff of the Museum School.

18B INTRODUCTION TO CONTEMPORARY ART

NOT OFFERED, 1960-61

MR. BROWN

Freshman Orientation Course

ORIENTATION. A required non-credit course for freshmen. Two periods per week are required for most of the first semester. Additional class periods are planned during the second semester to discuss the selection of a major field of study.

Topics include the history and nature of the university; liberal and vocational education; the curriculum; the individual in relation to the institution, the staff, and fellow students; the library; reading, note taking; methods of study; examinations; and the physiology of sex.

GENERAL ORIENTATION

Dean Hughes, Dean Borger.

PHYSIOLOGY OF SEX

Dr. Deering, Dr. Kressler.

General Education

Courses in general education are distinguished from courses which are listed in departmental announcements by point of view and breadth of approach rather than by content. They offer the student an opportunity to obtain a core of information and of ideas which will be possessed in common with many of his contemporaries and to stimulate intelligent and critical interest in fields of learning where he has no expectation of attaining professional competence. General education courses are thus a valuable supplement to the major program. They are often outside the sequence of courses in a student's major or field of special interest and are generally without specific prerequisites. The courses are classified as Group A or B or C and may be used to meet college requirements wherever a particular group is specified in the freshman program or in the requirements for a bachelor's degree.

G.E.10 INTRODUCTION TO PHYSICAL SCIENCE

NOT OFFERED, 1961-62

MR. ROOPE

G.E.17: MAJOR BRITISH WRITERS

NOT OFFERED, 1961-62

MR. CARTER, 1ST SEM.

MR. SULTAN, 2ND SEM.

History of COURSES

14. EUROPE AND THE UNITED STATES SINCE 1500.

A historical survey, classified as a Group B course and open to freshmen. A fee of \$1 is collected for supplies and duplicate library books. (Lee and Campbell, 1960-61)

Messrs. Jordan, Campbell, Abrash and Borg.

18. LITERATURE AND THE NATURE OF MAN.

The course is designed to serve the general student by providing him with an opportunity to investigate ideas held by outstanding literary artists of the Western World concerning the nature of man and his relation to the universe. The works are also to be studied as representatives of the cultures of which they are products. The course is planned not only to introduce the student to a body of knowledge and experience held in common by educated men and women in our society but also to help him to clarify his thinking concerning certain basic problems and to develop attitudes that are both humane and creative. The subject matter undertaken includes Sophocles' *Oedipus the King*, the *Book of Job*, the *Inferno* from Dante's *Divine Comedy*, Shakespeare's *King Lear*, Milton's *Paradise Lost*, Moliere's *Misanthrope*, Goethe's *Faust*, Part I, and selected poems of T. S. Eliot. All non-English works are read in translation. Meets the requirement for a third semester of English in addition to English 11 but not the requirement in Fine Arts. Classified as a Group C course. Open to sophomores, juniors and seniors with the consent of the instructors. Successful completion of first semester is normally required for admission to second semester.

Mr. King and Mr. Anderson.

115. MAN AND LANGUAGE.

Not offered, 1961-62.

An introduction to the analysis of the nature and function of human language: its role in the life of individuals and societies. What is language? What is the relation between language and thought? Does our language partially determine how we perceive the world? Why do languages change, and how? Is communication the primary function of language? How does language bind social groups together? How are the world's languages related to each other? Why don't we have a world language?

Mr. Reid.

Geography

DEPARTMENT FACULTY

Samuel Van Valkenburg, Ph.D., *Professor; Director of Graduate School of Geography*

Raymond E. Murphy, Ph.D., *Professor of Economic Geography; Editor of Economic Geography*

Henry J. Warman, Ph.D., *Professor; Secretary of Graduate School of Geography*

Rodman E. Snead, M.A., *Assistant Professor of Geography*

Guy H. Burnham, A.M., *Instructor in Cartography*

J. W. Birch, Ph.D., *Visiting Professor of Geography*

The Graduate School of Geography was established in 1921, and Clark was, therefore, the second University in the United States to offer, in a separate department, graduate training in geography. At the present time, a comprehensive program of graduate training is provided leading to the Master's and Doctor's degrees. In addition, the Staff offers

a full series of courses for undergraduates within the liberal program of Clark University. Details of the undergraduate and graduate programs are given in subsequent sections.

UNDERGRADUATE PROGRAM

Majors in geography are required to take seven year-courses, or the equivalent, in geography and related fields. At least four, and not more than five, of these courses must be in geography.

Geography 10, Elements of Geography, is usually taken in the freshman year, or as early as possible after the selection of Geography as a major. One or two of the following courses may be taken during the sophomore year: Geography 12a, Geography 16, Geography 191. Number "2" courses should not be undertaken until the junior or senior years. Geography majors should plan their work in related fields so that the basic courses prerequisite to the advanced courses of the junior and senior years are taken in the freshman and sophomore years.

Subjects in Group A (Science and Mathematics) strongly recommended by the staff are mathematics, geology and biology. However, where special interest is expressed in physics, chemistry, or psychology, the student's program can be planned to include these subjects.

Related fields are found listed under Group B (Social Science). General Education 14 is recommended for the freshman year. Courses recommended for the sophomore year are: Economics 11, Government 15, History 12, Sociology 11. More advanced work in the fields of sociology, international relations, psychology, and philosophy will depend largely upon the individual student's interest.

A junior or senior pursuing an "honors program" in geography is afforded an opportunity to study in the Graduate School of Geography. For example, a superior student, after petitioning and receiving approval of the College Board and the Secretary of the Graduate Board, may take graduate courses. On rare occasions an undergraduate student has been invited to participate in the Fall Field Camp of the Graduate School.

Independent honors projects are under the personal supervision of one of the staff members. Such work must be completed within the semester in which it is started, or proof advanced that the study warrants more time. The staff also conducts an oral examination to ascertain the achievement of an "honors student."

THE GRADUATE SCHOOL OF GEOGRAPHY

The Graduate School of Geography offers qualified students advanced training in geography. The map collection, libraries, and special laboratories for cartography provide unusual facilities for research work in residence.

Staff members spend part of their time in travel and research studies. While in residence, they offer regular courses of instruction and direct advanced research work. Visiting lecturers, both American and foreign, supplement the regular staff.

Master of Arts: Candidates will pass written examinations in at least six of the following fields: climatology, economic geography, human and cultural geography, land utilization, physiography, political geography, regional geography, and urban geography. Proof of proficiency in cartography is also required. Oral examinations for the master's degree cover four fields approved by the staff.

Doctor of Philosophy: Candidates are required to submit superior written examinations, and to pass an oral examination covering six fields approved by the staff. The oral exami-

nation is scheduled after language requirements are fulfilled. In general, a year of work beyond the master's degree should prepare candidates for the oral examination preliminary to acceptance as candidates for the doctor's degree and to work on dissertations.

Theses and Dissertations

The master's thesis will be written on a topic within the field of the student's special interest. The research will be carried out after the student has passed the oral examination and will be supervised by a member of the staff. At least seven weeks before the date of the commencement at which the degree is expected to be conferred, the candidate must submit a preliminary draft of the thesis to his major professor; this will then be circulated among the staff members for approval. After corrections, if any, have been made and approval given by the major professor, the thesis is typed in final form. The original copy of the final draft is delivered to the Registrar at least four weeks before the date of commencement and a carbon copy is presented to the department.

The doctoral dissertation is expected to make an original contribution to the subject of geography. At least ten weeks before the date of the commencement at which the degree is expected to be conferred, the candidate must submit a preliminary draft to his major professor for circulation among the staff members. If the dissertation is approved, a date for its oral defense will then be set. The candidate is expected to defend his dissertation and, at the discretion of the examining committee, may be questioned on all of his graduate work. If the defense is adequate, and after any necessary corrections have been made and approved by the major professor, the dissertation is typed in final form. An original copy must be delivered to the Registrar and a carbon copy to the department at least four weeks before the date of commencement. Students should note that the Registrar's copy of the dissertation must include 2 official title pages, academic history page, an abstract, and a *précis*.

All dissertations are microfilmed and, for this reason, it is required that illustrations be in black and white.

Students' Fees

The field camp fee is approximately \$80; it covers camp tuition, board and lodging, transportation, maps, drafting supplies, and the use of meteorological instruments and other equipment. The fee is payable to the camp director on or before the first day of camp.

The workroom fee, \$5 a semester, is payable on November 1 and March 1. It helps to maintain equipment used by the graduate students.

The classroom fee, \$5 a semester, is payable on November 1 and March 1. It is for mimeographing and for the maintenance, in part, of the classroom wall maps and other equipment.

Distinctive Features and Specialization

The Clark Graduate School of Geography has the substantial advantage of being centrally situated within New England, a region of varied rural and urban landscapes and renowned cultural centers.

The School has become a traditional "port of call" for professors of geography from this and other countries, and the graduate students have opportunities to visit with them as well as to attend the lectures which are arranged.

Graduate students are assigned desks and shelves in the Geography Workroom. Staff offices are located in the same building; conferences, therefore, are easily arranged. Both

workroom and classroom have direct connections with the periodical room and the open shelves of the University Library. The Libbey Library, a special room adjoining the Workroom, serves for general conferences and seminars.

The Graduate Students, through the years, have maintained the Clark University Geographical Society. It publishes, twice a year, *The Monadnock*, a booklet which keeps geography Alumni in touch with each other and with current activities in the School.

The professional magazine *Economic Geography* is edited by a staff member. Started at Clark University over a quarter of a century ago, it is the only magazine published in English that specializes in the economic phases of geography.

An outstanding feature of the Graduate School of Geography is the Field Camp program of three weeks duration at the beginning of the Fall term. Resident candidates for graduate degrees in geography attend the Field Camp. The program includes studies of land utilization, physiography, urban geography, and weather, with special training in mapping and other field techniques. Following return to the campus, about ten days are allowed for the completion of field reports.

Graduate course work begins on the second Monday after the close of the Field Camp; it ends about May 1, giving students time to coordinate their work prior to the oral examinations.

There are certain basic courses for graduate students. The Staff recognizes, however, that it is impossible for anyone to become proficient in all phases of geography and, therefore, encourages candidates for the doctor's degree to specialize.

Principles COURSES

10. (ELEMENTS) OF GEOGRAPHY. (Indivisible)

Physical phases of geography and application of some principles of geography to selected regions. Open to freshmen and sophomores. Juniors and seniors admitted only by special permission of the instructor. Mr. Warman.

12a. INTRODUCTION TO (CLIMATOLOGY.) Weather + Climate

Practical exercises in meteorology and climatology, use of weather instruments, discussion of various theories. Prerequisite: Geography 10 or equivalent. 1961-62, Mr. Snead.
1960-61, Mr. Warman

16. ECONOMIC GEOGRAPHY. (Indivisible, unless instructor approves)

An introductory study of the major areal differences in both kind and level of economic development. Prerequisite: Geography 10 or Economics 11, or equivalent. Mr. Birch.

191. CARTOGRAPHY AND GRAPHICS.

Preparation of maps, graphs, charts, block drawing. Restricted to twenty. (See instructor). Mr. Burnham.

20b. GEOGRAPHY IN EDUCATION.

Geography in the present-day school system; designed to meet needs of those teaching or expecting to teach geography as a separate subject or in the Social Studies. Mr. Warman. Not offered, 1961-62

201. POLITICAL GEOGRAPHY.

Major political problems of the world as related to geographic factors and applied to selected regions. Mr. Van Valkenburg.

210a. PRINCIPLES OF GEOMORPHOLOGY.

Mr. Snead.

282a. REGIONAL GEOGRAPHY OF ANGLO AMERICA.

Not offered, 1961-62.
Mr. Shaw, 1960-61

Departments and Courses

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- 283a. REGIONAL GEOGRAPHY OF MIDDLE AMERICA. (Not offered, 1960-61) Mr. Warman.
 283b. REGIONAL GEOGRAPHY OF ^{Latin America (1960-61)} SOUTH AMERICA. (1961-62) Mr. Warman.
 285b. REGIONAL GEOGRAPHY OF ^{southern} ASIA. Mr. Snead.
 286b. REGIONAL GEOGRAPHY OF AFRICA. Not offered, 1961-62.
 289a. REGIONAL GEOGRAPHY OF THE U.S.S.R. Not offered, 1961-62.
 291. CARTOGRAPHY. Mr. Burnham.
 298b. MAP AND AERIAL PHOTOGRAPH INTERPRETATION. Not offered, 1961-62.
 30. GENERAL SEMINAR. Mr. Raisz, 1960-61
 Required of all graduate students in residence. Staff.
 32. (REGIONAL) CLIMATOLOGY. Mr. Van Valkenburg.
 34. ~~Rural~~ LAND USE. Mr. Birch
 A study of the factors associated with the spatial differentiation of rural land uses. Particular attention will be given to the use of land for agriculture and to relevant methods of area research. Mr. Birch.
 36. PROBLEMS IN ECONOMIC GEOGRAPHY.
 Various research fields, research methods, and detailed techniques in economic geography. Mr. Murphy.
 37. HUMAN AND CULTURAL GEOGRAPHY.
 The geography of racial groups and their cultures applied to regions. Mr. Warman.
 314. (REGIONAL) PHYSIOGRAPHY (OF THE WESTERN HEMISPHERE.) (Two hours lecture and two hours laboratory). (Given merely as "Physiography", 1961-62) Mr. Snead.
 315. REGIONAL PHYSIOGRAPHY OF THE EASTERN HEMISPHERE. Not offered, 1961-62.
 341b. INTRODUCTION TO QUANTITATIVE METHODS. Mr. Woods, 1960-61
 Some problems of conception, measurement, and evaluation in geographical research. Not offered, 1960-61 or 1961-62
 Mr. Birch.
 361. URBAN GEOGRAPHY.
 The modern city from the geographic viewpoint, with emphasis on the American city. Mr. Murphy.
 399a. FIELD METHODS AND STUDIES. Staff.

RESEARCH COURSES

- | | |
|------------------------------|---------------------------|
| 200. GEOGRAPHY IN EDUCATION. | 360. ECONOMIC GEOGRAPHY. |
| 310. PHYSIOGRAPHY. | 370. HUMAN GEOGRAPHY. |
| 320. CLIMATOLOGY. | 380. REGIONAL GEOGRAPHY. |
| 340. LAND USE. | 390. POLITICAL GEOGRAPHY. |
| 350. URBAN GEOGRAPHY. | |

Geology

DEPARTMENT FACULTY

Wesley E. Bryers, A.B., *Instructor in Geology*

UNDERGRADUATE PROGRAM

The department does not offer an undergraduate major. The general course, Geology 12, is closely related to geography and is usually required for majors in that department.

COURSES

12. GENERAL GEOLOGY.

Introduction to geology, origin of the earth, its development through time and the succession of plant and animal life. First semester deals with common rocks, their structure, origin and occurrence; geological activities of the air, streams and sea; nature of glaciers, volcanoes and earthquakes, and age of the earth. Laboratory work consists of rock and mineral identification and map interpretation. Second semester deals with the origin of continents and ocean basins, their development through time; the glacial periods and antiquity of man; development of surface features of North America; and evolution of life through geologic time. Laboratory work consists of geologic map interpretation and fossil identification. Occasional field trips. Indivisible course. Open to freshmen.

(Mr. Wingner, 1960-61) Mr. Bryers.

121a. INTRODUCTORY MINERALOGY.

Study of crystallographic, physical and chemical properties of common minerals.

Not offered, 1960-61

Mr. Bryers.

122b. ECONOMIC GEOLOGY.

Study of the origin and structural relations of mineral deposits, their geographic distribution and economic importance.

Not offered, 1960-61

Mr. Bryers.

German

DEPARTMENT FACULTY

Karl J. R. Arndt, Ph.D., *Professor of German, Department Chairman*

James S. Edwards, M.A., *Associate Professor of German*

Herbert J. Nerjes, M.A., *Assistant Professor of German*

UNDERGRADUATE PROGRAM

Undergraduate courses are provided for the acquisition of facility in the use of the German language, a comprehension of German culture, a knowledge of major German writers and thinkers, and an understanding of American-German relations. The departmental major will be required to complete certain extracurricular reading assignments.

COURSES

11. INTRODUCTORY GERMAN.

Introduction to and study of pronunciation, vocabulary, elements of grammar, composition and reading of suitable modern German prose. Indivisible course.

Mr. Arndt, Mr. Edwards, Mr. Nerjes.

12. INTERMEDIATE GERMAN.

Review of first-year grammar, translation from and into German, exercises in written and

oral composition, and reading of modern German prose. Prerequisite: German 11 or two years of secondary school German. Indivisible Course.

13. ^{Advanced} ~~INTRODUCTION TO GERMAN~~ ^{Reading} ~~LITERATURE~~ (1961-62) Mr. Arndt, Mr. Edwards, Mr. Nerjes.

Third-year course completing the undergraduate language requirement in German. Prerequisite: German 12. Mr. Edwards, Mr. Nerjes.

132a. ORAL AND WRITTEN GERMAN.

Practice in writing German letters, study of modern prose as a basis for practice in the oral use of the language. Prerequisite: German 12. Not offered, 1961-62 Mr. Arndt.

141. GERMANIC CIVILIZATION.

Illustrated lecture course on the literature, history and fine arts of German lands from the Holy Roman Empire to the present day, with emphasis on the Reformation, Age of Enlightenment and the Classical Period. Given in English. Not offered, 1961-62 Mr. Edwards.

152. GERMAN LITERATURE I.

Survey of German literary movements from earliest times to the end of the Classical Period. Not offered, 1961-62 Mr. Arndt.

153. GERMAN LITERATURE II.

Survey of German literary movements from the beginning of the Romantic Period to the present. Mr. Arndt.

161b. THE GERMAN LYRIC.

Mr. Arndt.

162a. FAUST.

Goethe's Faust (both parts) as the highest poetic development of the Faust legend. Not offered, 1961-62 Mr. Arndt.

164b. THE GERMAN NOVEL OF SELF-DEVELOPMENT.

Mr. Arndt.

166. GERMAN DRAMA SINCE KLEIST.

Mr. Edwards.

200b. GERMAN SEMINAR.

For German majors in their senior year. The work of the seminar will vary from year to year according to the needs of the students. Mr. Arndt.

History, Government and International Relations

DEPARTMENT FACULTY

Dwight E. Lee, Ph.D., *Professor of Modern European History*,
Department Chairman, (On leave, first semester, 1961-62)

Robert F. Campbell, Ph.D., *Professor of American History*

Sherman S. Hayden, Ph.D., *Professor of International Relations*, *Acting Department Chairman*

H. Donaldson Jordan, Ph.D., *Professor of English History*
(On leave, second semester, 1961-62)

Clifford K. Shipton, Ph.D., *Professor (affiliate) of American History*

Morris H. Cohen, Ph.D., *Associate Professor of Government*

Gerald N. Grob, Ph.D., *Associate Professor of American History*
 Merritt G. Abrash, Ph.D., *Assistant Professor of History*
 Daniel R. Borg, M.A., *Instructor in European History*
 George H. Merriam, Ph.D., *Lecturer in American History*
 Clifford K. Shipton, Ph.D., *Professor (Affiliate) of American History*
 UNDERGRADUATE PROGRAM

The department offers basic courses in the fields of American, European and British history, American and European government, and international relations. It offers major programs of study in history or government and participates in the interdepartmental programs of International Relations and American Civilization.

All departmental majors must take General Education 14, preferably in the freshman year; Economics 11, normally before the end of the sophomore year; and History 205a and 205b, in either the junior or senior year. Majors in government should also take Government 15 before the end of the sophomore year. Further elections in this and related departments are determined by the student's special interest but they are expected to include at least two upper-class courses in this department, in addition to History 205.

Non-majors who have not taken General Education 14 may elect other courses offered by the department with permission of the instructor if, in his judgment, the student has an adequate background for the course.

GRADUATE PROGRAM

The principal fields of graduate study are American, English and European history and politics, modern diplomacy, and the international relations of the United States, Europe, the Commonwealth and the Far East.

Master of Arts: The program for the degree of Master of Arts is worked out individually with each student, who may choose to concentrate on history, government or international relations. All students are required to take the departmental seminar, History 30a.

Doctor of Philosophy: The program for the degree of Doctor of Philosophy may be taken in history or international relations. Each student must choose six fields of study, to be agreed upon as early as possible in the first year of residence beyond the Master of Arts and after a conference between the student and the department staff. In a history program, at least one field must be chosen from related subjects. In an international relations program, work in economics and geography is expected as part of an integrated program, to be arranged by the department in consultation with the other departments concerned. Three of the six fields may be completed either by course work or by passing written examinations. The other three are tested by an oral examination given by the staff. The passing of the six fields by courses or examination constitutes the "preliminary examination."

The doctoral dissertation, written in one of the six fields which is designated as the special field, must be submitted in complete preliminary draft to the supervising instructor not later than March 1 of the year in which the candidates hope to receive the degree. The final examination for the doctorate covers both the dissertation and the special field.

COURSES IN HISTORY

GENERAL EDUCATION 14. EUROPE AND THE UNITED STATES SINCE 1500.

A complete description of the course is given under General Education. Required of departmental majors.

12. HISTORY OF ENGLAND. Not offered, 1961-62.
Constitutional history is emphasized, particularly in the first semester. Offered in alternate years.
- 205a. INTRODUCTION TO POLITICAL PHILOSOPHY.
A study of the main trends of Western political thought with reference to their underlying social, political and economic realities. Required of departmental majors.
Mr. Jordan.
- 205b. RECENT POLITICAL THOUGHT.
The conflicting ideologies of our time in their development since the French Revolution. Required of departmental majors.
Mr. Abrash, 1961-62
Mr. Jordan, 1960-61
- 21b. FOUNDATIONS OF MODERN EUROPE. Not offered, 1960-61
The later Medieval and the Renaissance periods. Offered in alternate years. Mr. Lee.
- 213b. EUROPEAN DIPLOMATIC HISTORY, 1848-1918. Not offered, 1960-61 Mr. Lee.
215. GERMANY SINCE 1500. Not offered, 1960-61
Offered in alternate years. Mr. Borg.
- 225a. RECENT HISTORY OF THE BRITISH EMPIRE COMMONWEALTH. Not offered, 1961-62.
Developments since about 1900. Offered in alternate years.
230. SOCIAL AND INTELLECTUAL HISTORY OF THE UNITED STATES.
American ideas and institutions from colonial times to the present. Mr. Grob.
- 234a. AMERICAN DIPLOMATIC HISTORY. Not offered, 1960-61
From 1776 to about 1941. Offered in alternate years. Mr. Hayden.
- 235a. THE UNITED STATES IN THE TWENTIETH CENTURY. Not offered, 1960-61
Offered in alternate years. Mr. Grob.
- 236a. AMERICAN POLITICAL HISTORY, 1828-1877. Not offered, 1961-62.
Offered in alternate years. Mr. Grob.
- 237b. ECONOMIC HISTORY OF THE UNITED STATES SINCE 1815. (Not offered, 1960-61) Mr. Grob.
- 239a. INTRODUCTION TO RESEARCH IN AMERICAN COLONIAL HISTORY. Not offered, 1960-61
Lectures on selected topics and opportunities for research in the field; discussion of problem areas. Admission only by permission of the instructors.
Mr. Merriam, Mr. Shipton.
- 274b. THE MODERN FAR EAST. Not offered, 1960-61
Primarily, international relations in the region since 1895. Offered in alternate years. Mr. Hayden.
- 281a. RUSSIA, 1700-1917.
A general history of Imperial Russia from the time of Peter the Great, emphasizing the development and nature of autocracy and serfdom, and Russia's emergence and problems on the international scene. Mr. Abrash.
- 282b. HISTORY OF THE SOVIET SYSTEM. Not offered, 1960-61
A brief survey of Marxist ideology and pre-1917 Russian history and a concentration on

the political, economic (non-technical) and social evolution of Russia under the Communist regime. Mr. Abrash.

30a. DEPARTMENT SEMINAR.

Introduction to bibliography and methods of research. Required of all first-year graduate students in the department. Mr. Grob and the Staff.

314a. EUROPEAN INTERNATIONAL RELATIONS, 1870-1918. (*Not offered, 1960-61*) Mr. Abrash.

331b. PROBLEMS IN THE HISTORY OF THE UNITED STATES. *Given as a year course, 1960-61*
Individual research topics, supplemented by readings and discussion in the field of United States history. Mr. Grob.

GRADUATE READING AND THESIS COURSES

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|------|---------|---|--|--------------------|
| 31. | READING | } | IN THE HISTORY AND INTERNATIONAL RELATIONS OF EUROPE. | Mr. Borg, Mr. Lee. |
| 310. | THESIS | | | |
| 32. | READING | } | IN THE HISTORY AND INTERNATIONAL RELATIONS OF ENGLAND
AND THE BRITISH EMPIRE. | Mr. Jordan. |
| 320. | THESIS | | | |
| 33. | READING | } | IN THE HISTORY OF THE UNITED STATES. | Mr. Grob. |
| 330. | THESIS | | | |
| 38. | READING | } | IN RUSSIAN HISTORY. | Mr. Abrash. |
| 380. | THESIS | | | |

COURSES IN GOVERNMENT

14. INTERNATIONAL RELATIONS.

A survey of world politics since 1914, with emphasis on the shifting patterns of power and the rise of new nations and revolutionary doctrines. The second semester deals mainly with World War II and later events. Mr. Hayden.

15. INTRODUCTION TO AMERICAN GOVERNMENT.

A short survey of the theories of the origins and purposes of the state is followed by a study of American government with emphasis on contemporary problems of the federal government. Mr. Cohen.

240. SEMINAR IN INTERNATIONAL RELATIONS.

Basic ideas and their application to current problems. Required for international relations majors. Open to a limited number of non-majors at the discretion of the instructor. Mr. Hayden.

241. INTERNATIONAL LAW AND ORGANIZATION.

Not offered, 1961-62.

First semester deals with the historic principles of international law and their application in the modern world. Second semester deals with the institutions created to handle problems of commerce, welfare and collective security on an international basis. Offered in alternate years. Mr. Hayden.

25a. COMPARATIVE GOVERNMENT.

Not offered, 1960-61

The governments and politics of Great Britain and the major European powers. Offered in alternate years. Mr. Cohen.

251a. AMERICAN POLITICAL PARTIES. Not offered, 1961-62.
 American party organizations, pressure groups and the electorate in American politics, with emphasis on current problems and trends in the field. Offered in alternate years.

252b. INTRODUCTION TO PUBLIC ADMINISTRATION.
 An examination of the role of administration in modern government, including problems of personnel administration, fiscal management, administrative regulation and government organization. Offered in alternate years. Mr. Cohen.

254b. AMERICAN CONSTITUTIONAL LAW. Not offered, 1961-62.
 The role of the Supreme Court in the development of policy, examined primarily by the case method. Contemporary problems are emphasized. Offered in alternate years.

255b. THE LEGISLATIVE PROCESS. Not offered, 1960-61
 A study of policy-making in Congress, involving problems of legislative organization and procedure, leadership and presidential-legislative relationships, examined primarily by the case method and by individual research on particular pieces of recent legislation.

Mr. Cohen.

341. PROBLEMS IN INTERNATIONAL RELATIONS. Mr. Hayden.

351. PROBLEMS IN AMERICAN GOVERNMENT. (Offered 1st sem. only, 1961-62) Mr. Cohen.

GRADUATE READING AND THESIS COURSES

34. READING }
 340. THESIS } IN INTERNATIONAL RELATIONS. Mr. Hayden.

35. READING }
 350. THESIS } IN AMERICAN AND COMPARATIVE GOVERNMENT AND POLITICS. Mr. Cohen.

International Relations

See the announcements of the Department of History, Government and International Relations and those listed under Interdepartmental Majors.

Interdepartmental Majors

The faculty has authorized interdepartmental majors in order to provide a broader study of certain fields than can be fitted into any departmental program while yet preserving the unity of subject essential to a major. An interdepartmental major includes eight or more required courses. At present two programs are offered under this plan.

International Relations

INSTRUCTOR IN CHARGE:

Sherman S. Hayden, Ph.D., *Professor of International Relations.*

FRESHMAN AND SOPHOMORE YEARS

General Education 14	Europe and the United States since 1500
Economics 11	Principles of Economics
Geography 10	Elements of Geography
Government 14	International Relations

JUNIOR AND SENIOR YEARS

Government 240	Seminar in International Relations
Government 241	International Law and Organization
Geography 201	Political Geography
Economics 207	International Economics
Economics	One-half course to be selected

American Civilization

INSTRUCTOR IN CHARGE:

Gerald N. Grob, Ph.D., *Associate Professor of American History.*

FRESHMAN YEAR

General Education 14	Europe and the United States since 1500
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SOPHOMORE YEAR

At least two of the following courses:

Government 15	Introduction to Government
Economics 11	Principles of Economics
Sociology 11	Principles of Sociology

JUNIOR AND SENIOR YEARS

History 230	Social and Intellectual History of the United States
English 111	A Survey of American Literature

Two and one-half additional courses chosen with the consent of the instructor in charge of the program.

Mathematics

DEPARTMENT FACULTY

Daniel Gorenstein, Ph.D., *Professor of Mathematics, Department Chairman*
 John S. Stubbe, Ph.D., *Associate Professor of Mathematics*
 Henry Frandsen, M.A., *Assistant Professor of Mathematics*
 Seymour Hayden, A.M., *Assistant Professor of Mathematics*
 (On leave, 1961-62)
 Bruce A. Bevelheimer, M.A., *Instructor in Mathematics*

UNDERGRADUATE PROGRAM

The department offers courses leading to a major in mathematics, courses necessary for the study of physical and certain social sciences and courses for the student wishing to learn the fundamental concepts of mathematics primarily for their cultural value.

The departmental major requires five year-courses in mathematics and two year-courses in an allied field of study. Mathematics 11, 12, 13 and 214 are required. However, a student may enter Mathematics 12, omitting Mathematics 11, if he (1) proves by an achievement test that he is qualified to do so and (2) desires to do so.

GRADUATE PROGRAM

The department offers courses leading to the degree of Master of Arts. The program is designed to give the student an understanding of the basic concepts of the major fields of mathematics and to fit him for further study in the subject if his talents warrant it.

Master of Arts: A reading knowledge of one foreign language is required. A thesis is also required, the subject of which may be chosen in consultation with a member of the department.

COURSES

11. FUNDAMENTALS OF MATHEMATICS.

Elementary study of mathematical logic, postulational systems, algebra, point sets, analytic geometry, the concept of function, trigonometric functions, natural numbers, cardinal numbers, the concept of limit, and some brief attention to elementary probability and statistical inference.

1961-62 — Mr. Gorenstein.
1960-61 — Mr. Hayden

12. CALCULUS.

Introduction to differential and integral calculus; essential for further study in mathematics as well as for the study of applications in the natural and social sciences.

Mr. Stubbe, Mr. Frandsen, Mr. Bevelheimer.

13. INTERMEDIATE CALCULUS.

Geometric and physical applications of integration, sequences and series, three-dimensional analytic geometry, partial differentiation, multiple integrals, and a brief introduction to differential equations. Prerequisite: Mathematics 12.

1961-62, Mr. Frandsen.
1960-61, Mr. Stubbe

14b. ELEMENTARY THEORY OF NUMBERS.

A study of the properties of divisibility, prime numbers, congruences and residues. Prerequisite: Mathematics 12.

Not offered, 1961-62.
1960-61, Mr. Harris

15b. DIFFERENTIAL GEOMETRY.

Elements of the metric geometry of curves and surfaces in Euclidean space developed by methods of calculus and analytic geometry extended to three dimensions. Prerequisite or to be taken concurrently: Mathematics 13.

Not offered, 1960-61
Mr. Bevelheimer.

16a. INTRODUCTION TO GEOMETRY.

Topics from projective geometry, non-Euclidean geometry and the foundations of Euclidean geometry. Prerequisite: Mathematics 13 or a B- or better in Mathematics 12.

Not offered, 1961-62.
Mr. Harris, 1960-61

17. MATHEMATICAL STATISTICS.

Elements of probability theory, frequency distribution test of significance, large and small sampling, analysis of variance. Prerequisite: Mathematics 12.

Mr. Stubbe.

18a. POINT-SET TOPOLOGY.

Set theory, topological spaces, continuous functions, and metric spaces. Prerequisite: Mathematics 13 or at least a B- in Mathematics 12.

Not offered, 1960-61

Mr. Bevelheimer.

214. ADVANCED CALCULUS.

Topics selected from among partial differentiation, integration, infinite series, improper integrals, Fourier series, integral transform and the calculus of variations. Prerequisite: Mathematics 13.

Mr. Bevelheimer.

215. MODERN ALGEBRA.

Introduction to the theory of groups, rings, integral domain, fields, vector spaces, matrices and related topics. Prerequisite: Mathematics 12 or consent of the instructor.

Mr. Frandsen.

216. FUNCTIONS OF A COMPLEX VARIABLE.

Analytic functions, line integrals, conformal mapping, Riemann surfaces. Prerequisite: Mathematics 214 or consent of the instructor.

Not offered, 1960-61

Mr. Stubbe.

218. FUNCTIONS OF A REAL VARIABLE.

Foundations of the real number system, algebra of sets, transfinite arithmetic, metric spaces, topological spaces, sequences and series, Measure theory, differentiation and integration, functional analysis. Prerequisite or taken concurrently: Mathematics 214, or consent of the instructor.

Not offered, 1961-62.

Mr. Stubbe, 1960-61

219. PROJECTIVE GEOMETRY.

Synthetic and analytic projective geometry, including the projective theory of conics. Prerequisite: Mathematics 12 or consent of the instructor.

Not offered, 1960-61

Mr. Gorenstein.

220. APPLIED MATHEMATICS.

Ordinary and partial differential equations and their applications, vector analysis, infinite series, line and surface integrals, Bessel functions, Legendre polynomials and Fourier series, introduction to functions of a complex variable. Prerequisite: Mathematics 13.

Not offered, 1961-62.

Mr. Stubbe, 1960-61

221. TOPOLOGY.

Introduction to algebraic topology including homotopy theory, singular and simplicial homology, and application to general spaces.

Not offered, 1961-62.

Mr. Bevelheimer, 1960-61

222. TOPICS IN ANALYSIS.

Content will be changed from year to year to fit the needs of graduate students.

Not offered, 1960-61

Staff.

223. TOPICS IN ALGEBRA.

Content will be changed from year to year to fit the needs of graduate students.

Staff.

225. ADVANCED MODERN ALGEBRA.

Galois theory, group theory, Wedderburn structure theorems for rings and linear algebras, introduction to algebraic number fields. Prerequisite: Mathematics 215.

Not offered, 1961-62.

Mr. Hayden, 1960-61

Music

DEPARTMENT FACULTY

Relly Raffman, M.A., *Associate Professor of Music*

UNDERGRADUATE PROGRAM

The department offers courses designed to teach students how to listen to music intelligently, to develop a comprehension of music on its own terms and to acquaint students with representative works from various periods of music history. A major in music is not currently offered. While the general degree requirement in fine arts can be satisfied by one semester of music, it is recommended that the prerequisite introductory course, Music 12a, be followed by one of the period surveys, 12b, 13a or 13b.

COURSES

12a. INTRODUCTION TO MUSIC.

The essential elements of musical construction. Prerequisite for all other courses except 15b. Open to freshmen. Mr. Raffman.

12b. THE BAROQUE AND CLASSICAL PERIODS.

Stylistic Survey of the 17th and 18th centuries. Open to freshmen. *Not offered, 1960-61* Mr. Raffman.

13a. TWENTIETH CENTURY MUSIC.

Mr. Raffman.

13b. ROMANTIC MUSIC.

Not offered, 1961-62.

The 19th Century. Open to freshmen.

14b. PROBLEMS IN THEORY.

Application of theoretical principles to analysis and composition. Prerequisite: Consent of the instructor. Open to freshmen. *Not offered, 1961-62* Mr. Raffman.

15b. KEYBOARD MUSIC.

Musical construction and style as seen through the medium of the keyboard. May be substituted for but not credited in addition to 12a. Open to freshmen. Mr. Raffman.

Philosophy

DEPARTMENT FACULTY

Robert N. Beck, Ph.D., *Professor of Philosophy, Department Chairman*

Jefferson A. White, M.A., *Assistant Professor of Philosophy*

UNDERGRADUATE PROGRAM

The department offers courses to students who wish to broaden their prospective and trace relations among the various fields of knowledge and to students who wish to major in philosophy.

The major consists of four courses in philosophy and three additional courses in related fields. The latter are determined according to the student's special interest.

COURSES

F11a. LOGIC AND SCIENTIFIC METHOD.

Principles of valid reasoning and inductive methods and their application to problems of the natural and social sciences. Consideration of the relations between logic and problems of value. Open to freshmen. Mr. Beck.

11b. PROBLEMS OF PHILOSOPHY.

Nature and method of philosophy. Application of philosophical method to contemporary personal and social problems. Detailed analysis of some typical problems in various fields of philosophy. (Mr. Jefferson, 1960-61) Mr. Beck.

12. HISTORY OF PHILOSOPHY.

Movements of philosophical thought from the early Greeks to the present day. First semester: Greek and Medieval Philosophy. Second semester: Modern Philosophy. Not open to freshmen. Prerequisite for second semester: One half-course in philosophy or General Education 14. (Mr. Hockenos, 1st sem., 1960-61; not offered, 2nd sem.) Mr. White.

13a. PROBLEMS OF ETHICS.

Not offered, 1961-62.

Consideration of important ethical theories to acquaint the student with problems and scope of ethics and to aid him in the formulation of an ethical outlook. Offered in alternate years. Open to juniors and seniors. Mr. Beck.

13b. PHILOSOPHY IN LITERATURE.

Not offered, 1961-62.

Man—his nature, relationship to himself, to others and to God, his values and self-understanding—in continental literature since the late 19th century. Open to juniors and seniors. Prerequisite: One half-course in philosophy. (Mr. Clive, 1960-61) Mr. White.

14a. SOCIAL PHILOSOPHY.

Principles underlying social structure and functions. Examination of the goals, purposes, norms and ideals of social process, and the relation of that process to the individual good. Offered in alternate years. Open to juniors and seniors. Mr. Beck.

15a. PHILOSOPHY OF RELIGION.

Not offered, 1960-61

Perennial themes such as the nature of man, the existence of God, literalism versus imagination, and the meaning of providence in history. Offered in alternate years. Open to juniors and seniors. Prerequisite: One half-course in philosophy. Mr. White.

15b. PHILOSOPHICAL ANTHROPOLOGY.

Not offered, 1961-62.

The essential nature of man, his place in nature, culture and society. Sociology of knowledge and art and the historical and natural dimensions of the human conditions. Prerequisite: One-half course in philosophy or consent of the instructor. Mr. White.

16. CONTEMPORARY PHILOSOPHY.

Not offered, 1961-62.

Important thinkers representative of modern developments in philosophy, with emphasis on the historical roots of their thought. Offered in alternate years. Prerequisite: One and one-half courses in philosophy, including Philosophy 12, or consent of the instructor.

Mr. Beck, 1960-61

Mr. White.

17a. READINGS IN ANCIENT PHILOSOPHY.

Not offered, 1960-61

Advanced work in the writings of one or more of the important philosophers of the ancient period. Offered in alternate years. Prerequisites: One and one-half courses in philosophy, including Philosophy 12, or consent of the instructor. Mr. Beck.

17b. READINGS IN MODERN PHILOSOPHY.

Not offered, 1960-61

Advanced study of representative thinkers of the modern period. Offered in alternate years. Prerequisite: One and one-half courses in Philosophy, including Philosophy 12, or consent of the instructor. Mr. Beck.

18b. HISTORY OF AMERICAN PHILOSOPHY.

Survey of important philosophical ideas in America with emphasis on their relationship to American experience. *Not offered, 1960-61 or 1961-62*
Mr. Beck.

EDUCATION 290b. PHILOSOPHY OF EDUCATION.

Description offered in the department statement under Education. *Not offered, 1960-61*
Mr. Beck.

Physics

DEPARTMENT FACULTY

Roy S. Anderson, Ph.D., *Professor of Physics, Department Chairman*

Percy M. Roope, Ph.D., *Professor of Physics*

Earl A. Hays, Ph.D., *Associate Professor (affiliate) of Physics*

Minoru Fujimoto, Ph.D., *Assistant Professor of Physics*

UNDERGRADUATE PROGRAM

The department offers courses to students wishing to major in physics. While emphasis is placed on preparation for graduate study, the major will also assure adequate training for teaching or professional work in physics.

The major consists of Physics 11, 200, 201, 204, 207, Mathematics 12, and one course in chemistry, usually Chemistry 11. Students preparing for graduate work in physics are urged to register for one course in mathematics each year and to elect Physics 202, 206 and 208.

Physics 11, or its equivalent is a prerequisite for all other courses in physics. Mathematics 12 is a prerequisite for courses with numbers beginning with the numeral 2. Students not possessing this minimal knowledge of calculus may not register in "2" level courses without the consent of the instructor. Concurrent registration in Physics 200 is required of all students registered in Physics 204, 205, 206 and 207.

Students in the Honors Program must register for at least one credit of Physics 235 and, at the conclusion of this course, must submit to the department a thesis based on this work. Recommendations for Honors in Physics are determined in part by the quality of the thesis and the performance of the student on an oral examination on the thesis and other areas of physics.

GRADUATE PROGRAM

The department offers courses leading to a Master of Arts degree in physics and to a Doctor of Philosophy in Chemical Physics. The latter degree is offered jointly with the Department of Chemistry and consists of a combination of courses in chemistry, mathematics and physics. While under the administrative guidance of the Department of Chemistry, students in this joint program conduct dissertation research in the Department of Physics.

COURSES

F11. GENERAL PHYSICS.

Detailed considerations of the principles of mechanics, heat, wave motion, optics, electricity, and atomic and nuclear physics. Lecture: 3 hours; Laboratory: 3 hours. Prerequisites: Mathematics 11, may be taken concurrently, and consent of the instructor is required in the absence of previous training in trigonometry. Prerequisite for all other courses in physics. Indivisible course, except by consent of the instructor. Mr. Anderson.

17. INTRODUCTION TO MODERN PHYSICS.

Elementary treatment of physical experiment and theory during the last 60 years, including the more recent atomic and nuclear developments. Mr. Roope.

1960-61 or

100. PHYSICAL MEASUREMENTS.

Not offered, 1961-62.

Laboratory course in procedures for obtaining, interpreting and evaluating experimental data. Theory of errors. Experiments in mechanics, heat and geometric optics. Occasional lectures. Laboratory: 3 hours throughout the year for each one-half course credit.

200. ADVANCED PHYSICAL MEASUREMENTS.

Not offered, 1960-61

Laboratory experiments in physical optics, electricity and magnetism, electronics, atomic and nuclear physics. Occasional lectures. Laboratory: 3 hours throughout the year for each one-half course credit. Prerequisite: Physics 100.

Mr. Fujimoto.

1960-61 or

201. MECHANICS.

Not offered, 1961-62.

Descriptions of the motions of a particle, of systems of particles, and of rigid bodies, using vector analysis, Lagrange's equations and Hamilton's principle.

202a. THERMODYNAMICS AND KINETIC THEORY.

Not offered, 1960-61 or 1961-62

The laws of thermodynamics, the kinetic theory of gases, and an introduction to statistical mechanics.

Mr. Roope.

204. ELECTRICITY AND MAGNETISM. (Formerly #23)

Not offered, 1960-61

Mathematical theory of electrostatics, electrodynamics, magnetostatics, magnetism, steady and varying currents, and the electron. Introduction to Maxwell's theory of electromagnetism. Prerequisite: Mathematics 13, may be taken concurrently, or consent of the instructor.

Mr. Fujimoto.

1960-61 or

205a. ELECTRONIC DEVICES AND CIRCUITS.

Not offered, 1961-62.

Principles of electron tubes and transistors, with emphasis on design and properties of electronic circuits. Offered in alternate years.

206b. PHYSICAL OPTICS.

Not offered, 1960-61

The phenomena of diffraction, interference, and polarization of light as explained by the electromagnetic theory.

Mr. Roope.

1960-61 or

207a. ATOMIC PHYSICS.

Not offered, 1961-62.

Structure of the atom as revealed by the properties of the electron, photoelectric effect and the interpretation of visible, ultraviolet and x-ray spectra. The principles of quantum mechanics are invoked.

1960-61 or

208b. INTRODUCTION TO THE SOLID STATE.

Not offered, 1961-62.

Description of solids; ionic crystals, dielectrics, conductors, superconductors, semiconductors, and magnetic materials.

218. PHYSICS AND THE EARTH SCIENCES.

Not offered, 1960-61

The application of physics to problems in oceanography, seismology, and the atmosphere, with emphasis on the physical problems common to all. Selected readings are utilized. One-half course credit. Through the year.

Mr. Hays.

230. SPECIAL TOPICS IN PHYSICS.

Independent studies in physics to provide for special needs. Offered only to physics majors with consent of the advisor. Given each semester.

Staff.

15A HEAT AND THERMODYNAMICS

NOT OFFERED, 1960-61

MR. ROOPE

124 ELECTRONICS

NOT OFFERED, 1961-62

MR. ANDERSON

227 THEORETICAL MECHANICS

NOT OFFERED, 1961-62

MR. ROOPE

235. HONORS.

Independent experimental or theoretical research in physics.

Staff.

340. SEMINAR.

Seminars on various topics of contemporary interest are offered each year. Emphasis is on discussions of recent literature in each field and the presentation of department research in the area. No course credit.

Mr. Anderson.

350. RESEARCH.

Staff.

Psychology

DEPARTMENT FACULTY

Seymour Wapner, Ph.D., *Professor of Psychology, Department Chairman*Heinz Werner, Ph.D., *Professor of Psychology, Emeritus*David Moriarty, M.D., *Professor (affiliate) of Psychology*Leslie Phillips, Ph.D., *Professor (affiliate) of Psychology*Joseph Weinreb, M.D., *Professor (affiliate) of Psychology*Robert W. Baker, Ph.D., *Associate Professor of Psychology*Clemens E. Benda, M.D., *Associate Professor (affiliate) of Psychology*Walter H. Crockett, Ph.D., *Associate Professor of Psychology*Tamara Dembo, Ph.D., *Associate Professor of Psychology*Gordon T. Gwinn, Ph.D., *Associate Professor of Psychology*Bernard Kaplan, Ph.D., *Associate Professor of Psychology*Morton Wiener, Ph.D., *Associate Professor of Psychology*Roger Bibace, Ph.D., *Assistant Professor (affiliate) of Psychology*Donald M. Krus, Ph.D., *Assistant Professor of Psychology*Theodore Leventhal, Ph.D., *Assistant Professor (affiliate) of Psychology*Herbert Lipton, Ph.D., *Assistant Professor (affiliate) of Psychology*Joseph H. McFarland, Ph.D., *Assistant Professor of Psychology*Joachim F. Wohlwill, Ph.D., *Assistant Professor of Psychology*Harold Goodglass, Ph.D., *Lecturer in Psychology*Donal S. Jones, Ph.D., *Lecturer in Psychology*Robert Kastenbaum, Ph.D., *Lecturer in Psychology*Werner Koella, M.D., *Lecturer in Psychology*Anthony Varjabedian, M.D., *Lecturer in Psychology*Peter H. Wolff, M.D., *Lecturer in Psychology*Victor H. Pentlarge, M.D., *Consultant to the Psychological Clinic,
Psychiatrist*Polly Deweese, M.S., *Consultant to the Psychological Clinic, Psychiatric
Social Worker*Eugenia S. Shere, Ph.D., *Research Associate*

UNDERGRADUATE PROGRAM

The department offers courses for students majoring in psychology, majors in allied fields and students wishing an orientation to the field of psychology for general cultural development.

Psychology 11 is prerequisite to all other psychology courses. Majors are required to take Psychology 11 and 212. Psychology 160b is recommended to be taken prior to Psychology 212. Students preparing for graduate work should obtain a reading knowledge of French and German.

GRADUATE PROGRAM

The department offers courses leading to both the Master of Arts degree and the degree of Doctor of Philosophy. Where the department feels that a student lacks necessary undergraduate preparation in psychology and related fields, specific courses of study will be prescribed.

Master of Arts: The customary program is five courses, including experimental psychology, statistical methods and three additional courses, supplemented by the writing of a thesis in the area of special interest.

Doctor of Philosophy: The student is required to pass with distinction five courses during the first year of graduate study and a minimum of four courses during the second year. He is required, normally at the end of the second year, through written examination, to demonstrate his competence in psychology as a whole and in an area of specialization. In addition, the student is required to demonstrate his ability to conduct independent research as evidenced by the presentation of an acceptable dissertation. Research for the dissertation should normally be completed during the fourth year at the university; however, the length of the program will vary depending upon individual circumstances. At a final oral examination a student is required to defend his dissertation and to show his competence in the general field of psychology and in his area of specialization.

The overall aim of the graduate program is to provide the student with a general, integrated background covering the various areas of psychology. Within this emphasis more specialized training—with special stress on experimental analysis—is available in the following areas: perception, learning, thinking and problem solving, language, social, and personality.

There are also two, more formalized, programs which provide specialized training in the areas of Clinical and Developmental Psychology.

Clinical Psychology Program. The department offers a four-year A.P.A.-approved program in clinical psychology leading to the degree of Doctor of Philosophy. Beyond the standards of proficiency in the general field of psychology expected of all students, the student in the Clinical Program will be required to demonstrate special mastery in the understanding of concepts in the clinical area and in the use of clinical methods. One year of internship is included in this four-year program. Provision is made for a wide variety of practical experiences in cooperating institutions, clinics and agencies. There are over 20 institutions and agencies, in Worcester, Boston, Providence and surrounding areas which cooperate in providing such practicum and research facilities.

Developmental Psychology Program. This program is designed to train students in a comparative-developmental analysis of behavior. It emphasizes not only the study of human development from infancy to old age, but also stresses the application of developmental principles, concepts and methods to problems of general psychology, psychopathology, social psychology, etc.

In addition to University scholarships, fellowships, teaching assistantships, and stipends, the department has available such forms of financial support as United States Public Health Service training stipends, Veterans Administration traineeships, and research assistantships.

INSTITUTE OF HUMAN DEVELOPMENT

Associated with the department is the Institute of Human Development, which has three aims: first, to integrate various research programs dealing with developmental problems; second, to bring to Clark University scholars, teachers, and research workers from disciplines for which developmental problems are pertinent such as anthropology, biology, and certain areas of medicine; third, to train research workers on pre- and post-doctoral levels in the comparative-developmental approach to behavior.

COURSES

F11. GENERAL PSYCHOLOGY.

Introduction to the principles of human behavior.

Mr. Wapner.

103b. THE ABNORMAL PERSONALITY.

Development of the abnormal personality and a survey of the major types of abnormal behavior. Prerequisite: Psychology 172a.

Mr. Baker.

150a. INTRODUCTION TO CHILD PSYCHOLOGY.

Mr. Wohlwill.

152b. PSYCHOLOGY OF ADOLESCENCE.

Development of personality during adolescence with special emphasis on personality changes of the adolescent in a modern urbanized culture.

Mr. Kastenbaum.

160b. INTRODUCTION TO QUANTITATIVE METHODS IN PSYCHOLOGY.

Problems of psychological measurement and statistical evaluation of psychological data.

Mr. Wohlwill.

170. SOCIAL PSYCHOLOGY.

The role of social factors in the behavior of individuals and of groups, including such topics as attitudes, prejudice, leadership and personality and culture.

Mr. Crockett.

172a. (PSYCHOLOGY OF) PERSONALITY DEVELOPMENT

The various theoretical approaches to the study of personality, with emphasis on trait theories, typologies, field theory and psychoanalysis. Also considered are the determinants of personality development and methods of appraising personality.

Mr. Baker.

201a. LEARNING AND MOTIVATION.

Role of learning and motivation in behavior.

Mr. Gwinn.

202b. PSYCHOLOGY OF THINKING.

Types of thought processes and methods of investigating them, with emphasis on concept formation, imagination, creative thought, reasoning and problem solving.

Mr. Gwinn.

209. DEVELOPMENTAL APPROACHES TO BEHAVIOR.

Application of developmental concepts to various facets of infra-human and human behavior, with emphasis on the ontogenesis of perception, concept-formation, symbolic activity (including play and speech), etc., in human beings.

Mr. Kaplan.

212. EXPERIMENTAL PSYCHOLOGY.

General survey of experimental psychology with emphasis on scientific methods and laboratory technique. Lecture: 2 hours; Laboratory: 3 hours.

First semester: Mr. Wiener.

Second semester: Mr. Krus.

220a. MATHEMATICAL APPROACHES TO PSYCHOLOGY.

Not offered, 1960-61

Intensive analysis of several mathematical models used in psychology. Offered in alternate years. Prerequisite: Mathematics 12, or consent of the instructor. Mr. Crockett.

230b. SENIOR SEMINAR IN PSYCHOLOGY.

Intensive discussion of special problems in psychology.

Staff.

301. EXPERIMENTAL METHOD IN PSYCHOLOGY.

Experimental Method considered generally and in its application to problems of perception. Lecture: 2 hours; Laboratory: to be arranged. Mr. Wapner.

302. STATISTICAL METHODS.

Descriptive statistics, statistical inference and experimental design in psychology.

Mr. Crockett.

303. HISTORY AND SYSTEMS OF PSYCHOLOGY.

Historical development of theories, concepts and methods in psychology. Mr. Gwinn.

304a. PHYSIOLOGICAL ASPECTS OF BEHAVIOR, I.

Not offered, 1961-62.

Neuro-anatomy as related to behavior.

Mr. Varjabedian.

305a. PHYSIOLOGICAL ASPECTS OF BEHAVIOR, II.

Neurophysiological aspects of behavior.

Mr. Koella.

311. CLINICAL METHODS, I.

Observation, interviewing and testing.

Mr. Leventhal.

312b. THEORIES OF DEVIANT BEHAVIOR.

Deviant behavior as viewed by various theories. Clinical and experimental evidence is examined. Mr. Bibace.

313a. PRINCIPLES AND CONCEPTS UNDERLYING PSYCHOLOGICAL TESTS.

Problems of psychological assessment by non-projective tests.

Donald
Mr. Jones.

315. ADVANCED CHILD PSYCHOLOGY.

Not offered, 1961-62.

Major dimensions and determinants of ontogenetic changes in behavior. Methodological problems in the study of children and in the assessment of developmental change. Offered in alternate years. Mr. Wohlwill.

316. OBSERVATIONAL METHODS IN THE STUDY OF CHILDREN.

Offered in alternate years.

Mr. Wohlwill and Staff.

317b. BEHAVIOR IN INFANCY.

Mr. Wolff.

321. HIGHER MENTAL PROCESSES.

Experimental research pertaining to such functions as remembering, classifying, problem-solving, reasoning and concept-forming. Mr. Kaplan.

322. ORGANISMIC-DEVELOPMENTAL APPROACHES TO BEHAVIOR.

Basic categories of the organismic-developmental approach to life sciences, with examination of the application of these categories to a wide range of problem areas in psychology. Mr. Kaplan.

323. PSYCHOLOGY OF LEARNING.

Theoretical viewpoints and experiments in the field of learning.

Mr. Gwinn.

324. THEORIES OF PERSONALITY.
Comparison of various theoretical approaches to the study of personality. Mr. Wiener.
325. ADVANCED SOCIAL PSYCHOLOGY. Not offered, 1961-62.
Intensive analysis of various theoretical systems in social psychology. Offered in alternate years. Mr. Crockett.
- 326b. THEORY OF PSYCHOLOGICAL SCALING.
Analysis of mathematical approaches to psychological scaling. Prerequisite: Psychology 220a. Offered in alternate years. Mr. Crockett.
331. CLINICAL METHODS, II.
Application of various clinical methods in the assessment of personality. Mr. Goodglass.
- 332b. THEORIES OF PSYCHOTHERAPY.
Comparison of various theoretical approaches to problems of psychotherapy. Mr. Wiener.
- 336a. CHILD PSYCHOLOGY IN RELATION TO GENERAL PSYCHOLOGY.
Theory and research in child psychology in relation to general psychological theory. Offered in alternate years. Mr. Wohlwill.
- 337b. SEMINAR ON PROBLEMS IN CHILD AND DEVELOPMENTAL PSYCHOLOGY.
Not offered, 1961-62.
341. SEMINAR ON CURRENT LITERATURE. Not offered, 1961-62.
351. CLINICAL METHODS, III. ✓
Integration of various methods in assessment of personality and behavior. Mr. Phillips.
352. CLINICAL METHODS, IV. ✓
Application of theoretical principles to psychotherapy. Mr. Weinreb.
356. PSYCHOPATHOLOGY OF CHILDHOOD. Mr. Benda.
357. PSYCHOLOGY OF SYMBOLIC BEHAVIOR. Not offered, 1961-62.
Basic aspects of symbolic behavior; theory, experimental research, ontogenesis, psychopathology of symbol formation. Offered in alternate years. Mr. Werner.
358. PSYCHOLOGY OF LANGUAGE.
Offered in alternate years. Mr. Werner.
- 361b. SEMINAR IN PSYCHOLOGICAL REHABILITATION. Miss Dembo.
- 362b. PSYCHOLOGICAL PROBLEMS IN GERONTOLOGY. Not offered, 1961-62.
- 363a. PROBLEMS IN COMPARATIVE PSYCHOLOGY. Not offered, 1961-62.
- 364b. SELECTED PROBLEMS IN PSYCHOPHARMACOLOGY. Not offered, 1961-62.
Mr. Krus.
- 365a. PROBLEMS IN THE PSYCHOLOGY OF SMALL GROUPS. Not offered, 1961-62.
380. RESEARCH IN PSYCHOLOGY. ✓
Direction of individual students in their research. Staff.

381. READINGS IN PSYCHOLOGY.

Critical analysis of literature in areas related to individual research.

Staff.

385. PARTICIPATION IN PSYCHOLOGICAL CLINIC, I.

Mr. Baker, Mr. Wiener.

386. PARTICIPATION IN PSYCHOLOGICAL CLINIC, II.

Mr. Baker, Mr. Wiener, Mr. Lipton.

387. PARTICIPATION IN PSYCHOLOGICAL CLINIC, III.

Mr. Baker, Mr. Wiener, Mr. Weinreb, Mr. Moriarty.

388. PARTICIPATION IN PSYCHOLOGICAL CLINIC, IV.

Mr. Baker, Mr. Wiener, Mr. Weinreb, Mr. Moriarty, Miss Deweese.

390. DEPARTMENTAL COLLOQUIUM.

Visiting Lecturers.

Romance Languages

DEPARTMENT FACULTY

J. Richard Reid, Ph.D., *Professor of Romance Languages, Department Chairman*Raymond E. Barbera, Ph.D., *Associate Professor of Romance Languages*J. Fannin King, M.A., *Associate Professor of Romance Languages*Theodore Nicol, Ph.D., *Associate Professor of Romance Languages*Curtis Marchant, M.A., *Assistant Professor of Romance Languages*

UNDERGRADUATE PROGRAM

The department offers courses in the languages and literatures of France, Spain and Spanish America. These courses fall into two groups; lower level—French and Spanish 11 and 12, and upper level—all other Romance language courses.

In the lower level the primary aim is the mastery of the skills of communication in a language, with a view to its effective use for a variety of possible ends. These skills include reading, writing, speaking and understanding as well as what may be called basic literacy in the language.

In the upper level, the primary aim is an acquaintance in depth with a foreign civilization, principally through a study of its literature but with attention also to other aspects of its culture and to the further perfection of linguistic competence. The courses in literature are complemented by others in civilization and in advanced composition, conversation and phonetics.

A major in Romance languages must comprise:

1. Four full courses to be chosen from French 13, 114, 123a, 151a, 152a, 153b and 154b; Spanish 13 and 114; and Romance Languages 124b.

2. French 113 or the equivalent.

3. General Education 14, or the equivalent, normally to be completed by the end of the sophomore year.

4. At least one course, to be approved by the department, in non-Romance literature.

Students majoring in Romance languages are expected to acquire a thorough knowledge of either French or Spanish and are urged to acquire a competent knowledge of the other, both in language and literature.

If at least two units of elementary Latin or elementary Greek have not been accepted for admission to college, a Romance language major must satisfy the classics requirements as prescribed under the heading "Major" in the statement of requirements for the degree of Bachelor of Arts.

Students intending to major in Romance languages should consult the department chairman. An honors program in Romance languages is available to qualified upperclassmen.

LANGUAGE LABORATORY

A modern electronic language laboratory is available for class instruction, independent study and self-appraisal. Use of the laboratory is required of students in the lower level courses in French and Spanish, and available to others. See the section on "Tuition and Other Charges" for the laboratory fee.

COURSES IN FRENCH

F11. ELEMENTARY.

A course for beginners, including the elements of grammar, pronunciation and conversational patterns, graded readings and the writing of simple French. Three class periods and one to two hours in the language laboratory per week. Open to freshmen. Indivisible course. Staff.

F12. INTERMEDIATE.

Review of the elements, and further development of basic literacy and of a balanced mastery of all the communication skills; intensive and extensive reading. An intensive oral approach is used in the classroom. Three class meetings and one to two hours in the language laboratory weekly. Prerequisite: French 11 or equivalent skill in the language to be determined by a placement test. Open to freshmen. Indivisible course. Staff.

*13. ORAL AND WRITTEN FRENCH.

A third-year course. Admission is subject to approval of the instructor in each semester. The normal sequence is 13a during the spring semester of one year followed by 13b the following fall semester. The two parts of the course are organized as follows.

13A. Given in the Spring semester.

Analytical study and practice of the elements of communication in French: basic conversation patterns; the sound rhythm and tone patterns of French pronunciation; review of grammatical topics; exercises in written expression. Conducted in French. Prerequisite: Grade of B— or higher in French 12, or equivalent skill in the language to be determined by a placement test. Open to freshmen. Offered in alternate years. Two regular class periods, one two-hour session and one to two hours in the laboratory per week. Mr. King.

Not offered, 1960-61

13B. Given in the Fall semester.

Advanced practice of communication in French. Compositions, oral reports, classroom discussion. Conducted in French. Prerequisite: French 13a, or equivalent skill in the language, to be determined by a placement test. Offered in alternate years. Two regular class periods, one two-hour session, and one to two hours in the laboratory per week.

Not offered, 1961-62.

Mr. King.

☐ *14. READINGS IN FRENCH LITERATURE.

A third-year course. The emphasis in the first semester is on reading as communication, with analysis and practice of the techniques of effective reading in French. The emphasis in the second semester is on an understanding of a number of novels and plays selected for their literary excellence and broad appeal. Prerequisite: French 12 or equivalent skill in the language, to be determined by a placement test. Open to freshmen.

Mr. Nicol, Mr. Marchant.

*Courses 13 and 14 are third-year courses within the meaning of the foreign language requirement for the degree of Bachelor of Arts. Course 14 is offered to meet the needs of the general student; course 13 is designed primarily for the student with particular interest and aptitude for language study who intends to take subsequent courses in literature. Both may be taken for credit.

113. INTRODUCTION TO FRENCH CIVILIZATION.

Not offered, 1960-61

A selective survey of the history, art, literature and music of France, from the Middle Ages to modern times. An elementary knowledge of French is desirable but not required. Admission is subject to the approval of the instructor. May be counted in fulfillment of the general requirement in fine arts but not of the requirement in foreign language. Offered in alternate years.

Mr. Nicol

114. GENERAL VIEW OF FRENCH LITERATURE.

An interpretation of the main currents of French literature. Each period is studied by concentrating attention on a limited number of works and authors best bringing to focus the characteristics of the period. Prerequisite: Grade of B- or higher in French 13 or 14, or the equivalent.

Mr. King.

123a. ADVANCED LANGUAGE.

Not offered, 1961-62

Introduction to the problems of stylistics with a study of selected grammatical topics. Conducted in French. Prerequisite: Grade of B- or higher in French 13b, or the equivalent. Offered in alternate years.

Mr. Nicol.

*151a. THE MIDDLE AGES AND THE RENAISSANCE.

Not offered, 1960-61

Emphasis is upon developing an understanding of the philosophical, religious and social attitudes of the Middle Ages and the Renaissance, with due attention to the facts of literary history. Conducted in French. Prerequisite: Grade of B-minus or higher in French 114, or the equivalent. Offered in alternate years.

Mr. King.

*152a. CLASSICISM.

Not offered, 1961-62.

A study of outstanding literary works, drawn principally but not exclusively from the age of Louis XIV, to illustrate the esthetic and intellectual nature of the classical point of view as it persists in the French thought of various periods. Conducted in French. Prerequisite: Grade of B- or higher in French 114, or the equivalent. Offered in alternate years.

Mr. Nicol.

*153b. ROMANTICISM AND REALISM.

Not offered, 1961-62.

A study of outstanding literary works, drawn principally but not exclusively from the late 18th and 19th centuries, to illustrate the esthetic and intellectual climates and the literary techniques generally described as romantic or realistic. Conducted in French. Prerequisite: Grade of B- or higher in French 114, or the equivalent. Offered in alternate years.

Mr. Nicol.

154b. THE MODERN PERIOD.Not offered, 1960-61*

A study of a few outstanding dramatists, novelists and poets to illustrate the highly varied literary attitudes characteristic of 20th century French literature. Conducted in French. Prerequisite: Grade of B- or higher in French 114, or the equivalent. Offered in alternate years.

Mr. Nicol.

*For French 151a, 152a, 153b and 154b a certain historical and analytical perspective such as is provided by French 114 is presupposed. These courses are planned so that they need not be taken in chronological order but may be taken at the student's convenience. Attention is given to the social forces and movements underlying the attitudes whose literary manifestation are under study.

ROMANCE LANGUAGES 124b. COMPARATIVE FRENCH AND SPANISH PHONETICS.*Not offered, 1961-62.*

The elements of general phonetics. A detailed study of the pronunciation of French and Spanish. Prerequisites: Grade of B- or higher in French 13a or Spanish 13; elementary knowledge of the other language. Advised for majors who plan to teach either language. Offered in alternate years.

Mr. Reid.

ROMANCE LANGUAGES 270 (Education 270). THE TEACHING OF ROMANCE LANGUAGES.

For complete description, see Education 270. (*Not offered, 1960-61* Mr. Reid and Staff.

COURSES IN SPANISH**F11. ELEMENTARY.**

A course for beginners, including the elements of grammar, pronunciation and conversational patterns, graded readings and the writing of simple Spanish. Three class periods and one to two hours in the language laboratory per week. Open to freshmen. Indivisible course.

Staff.

F12. INTERMEDIATE.

A review of the elements and further development of basic literacy and of a balanced mastery of all the communication skills; intensive and extensive reading of texts dealing with Spain and Spanish America. An intensive oral approach is used in the classroom. Three class periods and one or two hours in the language laboratory per week. Prerequisite: Spanish 11 or equivalent skill in the language, to be determined by a placement test. Open to freshmen. Indivisible course.

Staff.

13. ORAL AND WRITTEN SPANISH.Not offered, 1961-62.*

A third-year course. A rapid intensive review of grammar; the elements of phonetics; exercises in composition and pronunciation; conversational practice. Conducted in Spanish. Admission is subject to the approval of the instructor. Prerequisite: Grade of B- or higher in Spanish 12, or equivalent skill in the language, to be determined by a placement test. Open to freshmen. Offered in alternate years. Two regular class periods, one two-hour session, and one to two hours in the laboratory per week.

***14. READINGS IN SPANISH AND SPANISH-AMERICAN LITERATURE.**

A third-year course. The first semester is devoted to Spanish-American literature; the second semester to Spanish works. The emphasis in the first semester is on reading as communication, with analysis and practice of the techniques of effective reading in

Spanish. The emphasis in the second semester is on the understanding of a number of major works of the literature of Spain. Prerequisite: Spanish 12 or the equivalent skill in the language, to be determined by a placement test. Open to freshmen. Mr. Reid.

*Courses 13 and 14 are third-year courses within the meaning of the foreign language requirement for the degree of Bachelor of Arts. Course 14 is offered to meet the needs of the general student; course 13 is designed primarily for the student with particular interest and aptitude for language study who intends to take subsequent courses in literature. Both may be taken for credit.

114. THE LITERATURE OF SPAIN.

A general view of Spanish literature with emphasis on the origins and development of the novel and drama, culminating in the masterworks of the 19th century. Attention is given to political and cultural background. Prerequisite: Grade of B minus or higher in Spanish 13 or 14, or the equivalent. Offered in alternate years. Mr. Barbera.

ROMANCE LANGUAGES 124b. COMPARATIVE FRENCH AND SPANISH PHONETICS.

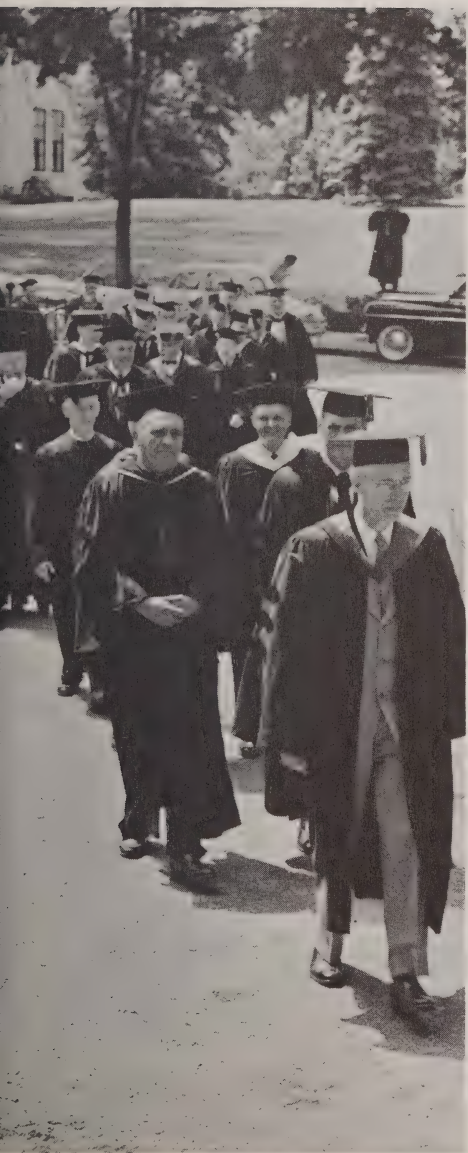
Not offered, 1961-62.

For complete description, see Romance Languages 124b under "Courses in French."

Mr. Reid.

ROMANCE LANGUAGES 270 (Education 270). THE TEACHING OF ROMANCE LANGUAGES.

For complete description, see Education 270. Not offered, 1960-61 Mr. Reid and Staff.



DIRECTORIES

Faculty

Members of the faculty and officers of instruction for 1961-62 are listed alphabetically with their titles, degrees and years at Clark University. Persons no longer on the faculty but who served during the previous year are included. The President and emeriti are listed first.

President

HOWARD BONAR JEFFERSON, Ph.D., LL.D., L.H.D., President. A.B., Denison University, 1923; Ph.D., Yale University, 1929; LL.D., Denison University, 1948, Hillsdale College, 1952, Northwestern University, 1958; L.H.D., Colgate University, 1951, Assumption College, 1956. (1946-)

Emeriti

- LEROY ALLSTON AMES, M.A., Professor of English Literature, Emeritus. (1908-44)
 SAMUEL J. BRANDENBURG, Ph.D., Professor of Economics and Sociology, Emeritus. (1923-50)
 JESSE LUNT BULLOCK, Ph.D., Professor of Chemistry, Emeritus. (1926-59)
 LORING HOLMES DODD, Ph.D., L.H.D., Professor of English and Art, Emeritus. (1910-49)
 ROBERT STANLEY ILLINGWORTH, M.A., ED.M., Professor of Speech and Drama, Emeritus. (1931-58)
 HOMER PAYSON LITTLE, Ph.D., LL.D., Dean of the College and Professor of Geology, Emeritus. (1922-54)
 CAREY EYSTER MELVILLE, A.B., Professor of Mathematics, Emeritus. (1909-48)
 * BENJAMIN SHORES MERIGOLD, Ph.D., SC.D., Professor of Chemistry, Emeritus. (1903-46)
 DAVID POTTER, Ph.D., Professor of Biology, Emeritus. (1924-59)
 HEINZ WERNER, Ph.D., Professor of Psychology, Emeritus. (1947-60); Chairman, Board of Directors, Institute of Human Development. (1961-)

Faculty and Officers of Instruction

- MERRITT GOLD ABRASH, Ph.D., Assistant Professor of History. B.A., Washington and Lee University, 1951; M.I.A., Columbia University, 1958; Ph.D., 1961. (1960-)
 VERNON AHMADJIAN, Ph.D., Assistant Professor of Botany. A.B., Clark University, 1952; A.M., 1956; Ph.D., Harvard University, 1960. (1959-)
 KARL OSCAR EMANUEL ANDERSON, Ph.D., Professor of English. A.B., Harvard University, 1927; M.A., 1928; Ph.D., 1942. (1945-)
 ROY STUART ANDERSON, Ph.D., Professor of Physics. A.B., Clark University, 1943; A.M., Dartmouth College, 1948; Ph.D., Duke University, 1951. (1960-)
 KARL JOHN RICHARD ARNDT, Ph.D., Professor of German. M.A., Washington University, 1928; Ph.D., The Johns Hopkins University, 1933. (1950-)
 ROBERT WILLIAM BAKER, Ph.D., Associate Professor of Psychology. A.B., Hobart College, 1947; Ph.D., Clark University, 1953. (1954-)
 GEORGE ANTHONY BALKO, JR., M.B.A., Assistant Professor of Business Administration. M.E., Stevens Institute of Technology, 1947; M.B.A., New York University, 1952. (1956-)

*-Died, January 9, 1962

- MITCHELL B. BALTER, Ph.D., Assistant Professor (affiliate) of Clinical Psychology. B.A., University of Michigan, 1950; M.A., University of Connecticut, 1952; Ph.D., 1959. (1958-61)
- FREDERICK E. BAMFORD, M.B.A., Assistant Professor of Economics and Business Administration. B.Mus., B.S. in B.A., Boston University, 1954; M.B.A., 1955. (1961-)
- RAYMOND EDMOND BARBERA, Ph.D., Associate Professor of Romance Languages. A.B., Brooklyn College, 1947; M.A., University of Arizona, 1948; Doctor en Letras, Universidad Nacional de Mexico, 1949; Ph.D., University of Wisconsin, 1958. (1953-)
- CLAUDE WILLIS BARLOW, Ph.D., Professor of Classics. A.B., Amherst College, 1928; M.A., Indiana University, 1930; Ph.D., Yale University, 1935. (1947-)
- TILTON MARSHALL BARRON, B.L.S., Librarian. A.B., Colorado College, 1937; B.L.S., Columbia University School of Library Service, 1940. (1954-)
- JAMES FRANKLIN BEARD, JR., Ph.D., Associate Professor of English. A.B., Columbia College, 1940; M.A., Columbia University, 1941; Ph.D., Princeton University, 1949. (1955-)
- ROBERT NELSON BECK, Ph.D., Professor of Philosophy. A.B., Clark University, 1947; M.A., Boston University, 1948; Ph.D., 1950. On leave, second semester, 1960-61. (1948-)
- CLEMENS E. BENDA, M.D., Associate Professor (affiliate) of Psychology. M.D., University of Berlin, 1922. (1958-)
- JOHN L. BETHUNE, Ph.D., Assistant Professor of Chemistry. B.S., Acadia University, 1947; Ph.D., Clark University, 1961. (1960-61)
- BRUCE A. BEVELHEIMER, M.A., Instructor in Mathematics. A.B., University of Michigan, 1956; A.M., 1957. (1960-)
- ROGER BIBACE, Ph.D., Assistant Professor (affiliate) of Clinical Psychology. A.B., University of British Columbia, 1949; Ph.D., Clark University, 1957. (1957-)
- JACK WILLIAM BIRCH, Ph.D., Visiting Professor of Geography. B.A., University of Reading, 1949; Ph.D., 1957. (1960-)
- DANIEL R. BORG, M.A., Instructor in History. B.A., Gustavus Adolphus College, 1953; M.A., Yale University, 1957. (1961-)
- HENRY CHARLES BORGER, JR., Ph.D., Professor of Education, and Dean of Students. A.B., Princeton University, 1933; M.A., Columbia University, 1938; Ph.D., 1954. (1950-)
- PHILIP HUBERT BREEN, LL.B., Lecturer in Business Law. A.B., College of the Holy Cross, 1920; LL.B., Boston University, 1923. (1947-)
- WESLEY E. BRYERS, A.B., Instructor in Geology. A.B., Rutgers University, 1956. (1961-)
- GUY HARVEY BURNHAM, A.M., Instructor in Geography and Cartographer, Graduate School of Geography. A.B., Clark University, 1916; A.M., 1922. (1922-)
- GEORGE CAMOUGIS, Ph.D., Assistant Professor of Physiology. B.S., Tufts College, 1952; A.M., Harvard University, 1957; Ph.D., 1958. (1958-)
- ROBERT FRANCIS CAMPBELL, Ph.D., Professor of American History, and Dean of the College. A.B., Yale College, 1939; A.M., Columbia University, 1940; Ph.D., 1947. (1946-57; 1960-)
- WILLIAM HOYT CARTER, JR., Ph.D., Associate Professor of English. A.B., Middlebury College, 1936; M.A., Harvard University, 1938; Ph.D., 1951. (1949-)
- GEOFFREY CLIVE, Ph.D., Assistant Professor of Philosophy. B.A., Colgate University, 1948; M.A., Harvard University, 1950; Ph.D., 1953. (1957-61)

- JAMES MADISON COFFEE, Ed.D., Associate Professor of Education, Director of Placement. A.B., Duke University, 1949; M.A., Cornell University, 1950; Ed.D., Harvard University, 1957. (1954-)
- MORRIS HAROLD COHEN, Ph.D., Associate Professor of Government. A.B., University of Chicago, 1939; Ph.D., 1950. (1947-)
- LYDIA PERRY COLBY, Registrar. (1932-)
- PETER ELIA COMALLI, JR., Ph.D., Assistant Professor of Psychology. A.B., Clark University, 1949; A.M., 1951; Ph.D., 1956. (1958-61)
- SAMUEL PENDLETON COWARDIN III, M.A., Assistant Professor of Fine Arts. A.B., Harvard University, 1943; M.A., 1948. (1949-)
- WALTER HOBSON CROCKETT, Ph.D., Associate Professor of Psychology. A.B., University of Kansas, 1947; M.A., 1949; Ph.D., University of Michigan, 1953. (1957-)
- JESSIE CAMPBELL CUNNINGHAM, A.M., Assistant Professor of English. Ph.B., University of Chicago, 1948; A.M., 1952. (1957-)
- TAMARA DEMBO, Ph.D., Associate Professor of Psychology. Ph.D., University of Berlin, 1930. (1953-)
- THOMAS JOSEPH DOLPHIN, A.B., Director of The Evening College. A.B., Rutgers University, 1951. (1957-)
- RALPH I. DORFMAN, Ph.D., Professor (affiliate) of Chemistry. B.S., University of Illinois, 1932; Ph.D., University of Chicago, 1934. (1955-)
- JAMES STANHOPE EDWARDS, M.A., Associate Professor of German. A.B., Brown University, 1936; M.A., 1938. (1947-)
- R. JOAN FINDLEY, M.A., Instructor in Romance Languages. B.S. in Ed., University of Illinois, 1957; M.A., 1959. (second semester, 1960-61)
- HENRY FRANDSEN, M.A., Assistant Professor of Mathematics. B.S. in Ed., University of Illinois, 1957; M.A., 1959. (1961-)
- MINORU FUJIMOTO, Ph.D., Assistant Professor of Physics. B.S., Osaka University, 1955; Ph.D., University of Southampton, 1959. (1961-)
- PHILIP L. GAMBLE, Ph.D., Lecturer in Economics. (1960-61)
- BURTON N. GATES, Ph.D., Research Associate in Botany. A.B., Clark University, 1905; A.M., 1906; Ph.D., 1909. (1954-)
- KATHARINE BLAIR GATES, Ph.D., Instructor in English. A.B., Vassar College, 1953; Ph.D., Radcliffe College, 1961. (1961-)
- HAROLD GOODGLASS, Ph.D., Lecturer in Psychology. B.A., College of the City of New York, 1939; M.A., New York University, 1948; Ph.D., University of Cincinnati, 1951. (1956-)
- DANIEL GORENSTEIN, Ph.D., Professor of Mathematics. A.B., Harvard University, 1943; Ph.D., 1950. On leave, 1960-61. (1951-)
- ROCHELEAU ZEPHIRIN GRANGER, JR., A.M. in Ed., Director of Physical Education for Men. A.B., Clark University, 1938; A.M. in Ed., 1939. (1949-)
- SANTE GRAZIANI, M.F.A., Associate Professor (affiliate) of Fine Arts. B.F.A., Yale University, 1942; M.F.A., 1948. (1958-)
- WARREN D. GRIBBONS, Ed.D., Assistant Professor of Education. A.B., Boston University, 1955; Ed.M., Harvard University, 1956; Ed.D., 1959. (1959-)

- GERALD N. GROB, Ph.D., Associate Professor of American History. B.S., College of the City of New York, 1951; A.M., Columbia University, 1952; Ph.D., Northwestern University, 1958. (1957-)
- GORDON T. GWINN, Ph.D., Associate Professor of Psychology. A.B., University of Arizona, 1942; Ph.D., Yale University, 1948. (1949-)
- HERBERT HABER, M.A., Instructor in English. A.B., Brooklyn College, 1954; M.A., University of Chicago, 1955. (1958-61)
- GEORGE EDWARD HARGEST, M.B.A., Associate Professor of Economics and Business Administration and Acting Director of the Division of Business Administration. B.S., Temple University, 1933; M.Ed., 1937; M.B.A., Boston University, 1947. (1942-)
- M. EVELYN HARRIMAN, M.A. in Ed., Lecturer in Education. B.S. in Ed., Boston University, 1948; M.A. in Ed., 1950. (1956-)
- MORTON EDWARD HARRIS, Ph.D., Assistant Professor of Mathematics. A.B., Yale College, 1955; A.M., Harvard University, 1956; Ph.D., 1960. (1960-61)
- EDWARD H. HASTINGS, A.M., Instructor in English. A.B., Wesleyan University, 1946; A.M., Harvard University, 1947. (1950-52; 60-)
- SEYMOUR HAYDEN, A.M., Assistant Professor of Mathematics. A.B., University of Wisconsin, 1947; A.M., Harvard University, 1948. On leave, 1961-62. (1957-)
- SHERMAN STRONG HAYDEN, Ph.D., Professor of International Relations. A.B., Harvard University, 1930; LL.B., 1933; M.A., Columbia University, 1936; Ph.D., 1942. On leave, second semester, 1960-61. (1946-)
- EARL E. HAYS, Ph.D., Associate Professor (affiliate) of Physics. A.B., Allegheny College, 1940; Ph.D., Northwestern University, 1949. (1961-)
- WARREN J. HOCKENOS, M.A., Lecturer in Philosophy. A.B., Hobart College; M.A., Boston University. (1960-61)
- M. HAZEL HUGHES, M.Ed., Dean of Women, Director of Physical Education for Women. B.Ed., Clark University, 1944; M.Ed., Boston University, 1949. (1942-)
- ROBERT MOOERS HYDE, A.M., Vice President. A.B., Rutgers University, 1947; A.M., University of Pennsylvania, 1949. (1954-)
- VERNON JONES, Ph.D., Professor of Educational Psychology. B.A., University of Virginia, 1920; M.A., 1920; M.A., Columbia University, 1924; Ph.D., 1926. (1926-)
- HENRY DONALDSON JORDAN, Ph.D., Professor of English History. A.B., Harvard University, 1918; M.A., 1922; Ph.D., 1925. (1931-)
- OTTO F. KALMAN, Ph.D., Assistant Professor of Chemistry. B.S. in Ch.E., Purdue University, 1955; M.A., Princeton University, 1958; Ph.D., 1959. (1961-)
- BERNARD KAPLAN, Ph.D., Associate Professor of Psychology. A.B., Brooklyn College, 1948; A.M., Clark University, 1950; Ph.D., 1953. (1955-)
- ROBERT KASTENBAUM, Ph.D., Lecturer in Psychology. B.A., Long Beach State College, 1954; Ph.D., University of Southern California, 1959. (1959-)
- GERSON KEGELES, Ph.D., Professor of Chemistry. B.S., Yale University, 1937; Ph.D., 1940. (1951-)
- FREDERICK W. KILLIAN, LL.B., Associate Professor of Sociology. LL.B., New York University, 1925; A.B., 1934. (1947-)

- JESSE FANNIN KING, M.A., Associate Professor of Romance Languages. A.B., Pomona College, 1936; M.A., Harvard University, 1937. (1946-)
- WERNER KOELLA, M.D., Lecturer in Psychology. M.D., University of Zurich, 1942. (1958-)
- DONALD MAX KRUS, Ph.D., Assistant Professor of Psychology. B.A., Drew University, 1949; A.M., Clark University, 1951; Ph.D., 1957. (1958-)
- DWIGHT ERWIN LEE, Ph.D., Professor of Modern European History, Secretary of the Graduate Board. A.B., University of Rochester, 1921; A.M., 1922; Ph.D., Harvard University, 1928. On leave, first semester, 1961-62. (1927-)
- THEODORE LEVENTHAL, Ph.D., Assistant Professor (affiliate) of Psychology. B.A., Brooklyn College, 1948; Ph.D., University of Kansas, 1953. (1955-)
- ROBERT EARLE LINGNER, M.A., Instructor in Geology. A.B., Clark University, 1954; M.A., University of Maine, 1956. (1956-61)
- HERBERT LIPTON, Ph.D., Assistant Professor (affiliate) of Psychology. B.A., Rutgers University, 1949; A.M., Clark University, 1951; Ph.D., 1954. (1956-)
- CURTIS MARCHANT, M.A., Assistant Professor of Romance Languages. B.A., University of California, 1947; M.A., 1949. (1959-)
- ARTHUR EARL MARTELL, Ph.D., Professor of Chemistry. B.S., Worcester Polytechnic Institute, 1938; Ph.D., New York University, 1941. (1942-61)
- JAMES ACKLEY MAXWELL, Ph.D., Professor of Economics. A.B., Dalhousie University, 1921; M.A., Harvard University, 1923; Ph.D., 1927. (1924-)
- JOSEPH H. MCFARLAND, Ph.D., Assistant Professor of Psychology. B.A., Brandeis University, 1955; M.A., Clark University, 1957; Ph.D., 1960. (1961-)
- FREDERICK EUGENE MELDER, Ph.D., Professor of Economics. B.B.A., University of Washington, 1926; M.A., 1931; Ph.D., University of Wisconsin, 1936. (1937-46; 1950-)
- GEORGE HENRY MERRIAM, Ph.D., Lecturer in American History, Director of Admissions. A.B., Clark University, 1944; A.M., Brown University, 1947; Ph.D., Clark University, 1961. (1952-)
- DAVID MORIARTY, M.D., Professor (affiliate) of Psychology. M.D., Boston University, 1947. (1960-)
- RAYMOND EDWARD MURPHY, Ph.D., Professor of Economic Geography. B.S., Missouri School of Mines and Metallurgy, 1923; M.S., University of Wisconsin, 1926; Ph.D., 1930. (1946-)
- KAZUO NAKAMOTO, D.Sc., Assistant Professor of Chemistry. B.S., Osaka University, Japan, 1945; D.Sc., 1953. (1959-61)
- HERBERT J. NERJES, M.A., Assistant Professor of German. A.B., Brown University; M.A., Yale University. (1961-)
- WILLIAM R. NES, Ph.D., Associate Professor of Biochemistry. B.A., University of Oklahoma, 1946; M.S., University of Virginia, 1948; Ph.D., 1950. (1958-)
- HOWARD WHITE NICHOLSON, Ph.D., Associate Professor of Economics. B.A., Oberlin College, 1942; M.A., Harvard University, 1948; Ph.D., 1950. On leave, first semester, 1960-61. (1958-)
- THEODORE NICOL, Ph.D., Associate Professor of Romance Languages. A.B., Clark University, 1926; M.A., Harvard University, 1928; Ph.D., 1933. (1946-)

- RUDOLPH FINK NUNNEMACHER, Ph.D., Professor of Zoology. B.S., Kenyon College, 1934; M.A., Harvard University, 1935; Ph.D., 1938. (1939-)
- PHILIP G. OLSON, Ph.D., Assistant Professor of Sociology. B.A., University of Arizona, 1954; M.A., 1956; Ph.D., 1959, Purdue University. (1961-)
- NICHOLAS LEWIS ONORATO, Ph.D., Visiting Lecturer in Economics. B.S., Boston University, 1951; A.M., Clark University, 1952; Ph.D., 1959. (1957-59, 1960-61)
- LESLIE PHILLIPS, Ph.D., Professor (affiliate) in Clinical Psychology. M.A., University of Chicago, 1944; Ph.D., 1949. (1946-)
- MARC RAEFF, Ph.D., Associate Professor of Russian History. M.A., Harvard University, 1947; Ph.D., 1950. On leave, 1960-61. (1949-61)
- RELLY RAFFMAN, M.A., Associate Professor of Music. A.B., Dartmouth College, 1943; M.A., Columbia University, 1949. (1954-)
- ERWIN RAISZ, Ph.D., Visiting Lecturer in Geography. Diploma, Royal Polytechnicum, Budapest, 1914; M.A., 1924; Ph.D., Columbia University, 1929. (1947-)
- J. RICHARD REID, Ph.D., Professor of Romance Languages. A.B., Swarthmore College, 1935; M.A., Harvard University, 1936; Ph.D., 1943. (1944-)
- JOHN THEODORE REYNOLDS, M.S., Assistant Professor of Microbiology. B.S., Boston College, 1951; M.S., University of Massachusetts, 1954. (1956-)
- PERCY MARTIN ROOPE, Ph.D., Professor of Physics. A.B., Clark University, 1920; A.M., 1924; Ph.D., 1927. (1921-)
- JOSEPH I. ROPER, Visiting Professor of Economics. B. Litt., Oxford University, 1915. (1960-61)
- HARRIS ROSENKRANTZ, Ph.D., Associate Professor (affiliate) of Biology. A.B., Brooklyn College, 1943; M.S., New York University, 1946; M.S., Cornell Medical College, 1948; Ph.D., Tufts Medical School, 1952. (1959-)
- BERNARD SARACHEK, M.A., Assistant Professor of Business Administration. B.A., University of Kansas City, 1952; M.A., 1955. (1959-61)
- NEIL ROLF SCHROEDER, A.B., Instructor in Public Speaking. A.B., Brown University, 1952. (1960-)
- ARTHUR J. SERRA, B.S., Assistant in Physical Education. B.S., Springfield College, 1956. (1960-)
- EARL B. SHAW, Ph.D., Lecturer in Geography. Ph.D., Clark University, 1933. (1960-61)
- DAYTON D. SHEPHERD, M.A., Lecturer in Education. B.S., Southwest Missouri State College, 1946; M.A., Yale University, 1950. (1954-)
- EUGENIA S. SHERE, Ph.D., Research Associate in Psychology. Ph.D., University of Jena. (1957-)
- CLIFFORD K. SHIPTON, Ph.D., Professor (affiliate) of American History. B.S., Harvard University, 1926; M.A., 1927; Ph.D., 1933. (1961-)
- RODMAN E. SNEAD, M.A., Assistant Professor of Geography. B.A., University of Virginia, 1953; M.A., Syracuse University, 1955. (1961-)
- ROBERT JOHN STAIRS, B.S., Assistant in Physical Education. B.S., University of Rhode Island, 1956. (1959-)

- JOHN SUNAPEE STUBBE, Ph.D., Associate Professor of Mathematics. B.S., University of New Hampshire, 1941; M.S., Brown University, 1942; Ph.D., University of Cincinnati, 1945. (1949-)
- THOMAS TAMOTSU SUGIHARA, Ph.D., Associate Professor of Chemistry. A.B., Kalamazoo College, 1945; S.M., University of Chicago, 1951; Ph.D., 1952. (1953-)
- STANLEY SULTAN, Ph.D., Assistant Professor of English. B.A., Cornell University, 1949; M.A., Boston University, 1950; Ph.D., Yale University, 1955. (1959-)
- EDWARD N. TRACHTENBERG, Ph.D., Associate Professor of Chemistry. A.B., New York University; A.M., Harvard University, 1951; Ph.D., 1953. (1958-)
- ARNOLD TREHUB, Ph.D., Lecturer in Psychology. A.B., Northeastern University, 1949; M.A., Boston University, 1951; Ph.D., 1954. (1958-61)
- ALDO P. TRUANT, Ph.D., Associate Professor (affiliate) of Biology. B.A., University of Western Ontario, 1944; Ph.D., Yale University, 1949. (1959-)
- ROGER CARLETON VAN TASSEL, Ph.D., Associate Professor of Economics, Director of the Summer School. A.B., Union College, 1947; M.A., Cornell University, 1950; Ph.D., Brown University, 1956. (1954-)
- SAMUEL VAN VALKENBURG, Ph.D., Professor of Geography, Director of the Graduate School of Geography. Ph.D., University of Zurich, 1918. (1926-1929; 1932-)
- ANTHONY VARJABEDIAN, M.D., Lecturer in Psychology. A.B., Clark University, 1941; M.D., Yale University, 1944. (1954-)
- SEYMOUR WAPNER, Ph.D., Professor of Psychology. A.B., New York University, 1939; M.A., University of Michigan, 1940; Ph.D., 1943. (1948-)
- HENRY JOHN WARMAN, Ph.D., Professor of Geography. B.S. in Ed., Bloomsburg State Teachers College, 1932; Ed.M., Temple University, 1938; Ph.D., Clark University, 1945. (1943-)
- JOSEPH WEINREB, M.D., Professor (affiliate) of Psychology. A.B., Vanderbilt University, 1931; M.D., 1935. (1947-)
- JEFFERSON A. WHITE, B.D., Assistant Professor of Philosophy. B.A., Baylor University, 1952; B.D., Yale University, 1957; M.A., Yale University, 1960. (1961-)
- MORTON WIENER, Ph.D., Associate Professor of Psychology, Director of Clinical Psychology Training Program. B.S., College of the City of New York, 1949; M.S., 1950; Ph.D., University of Rochester, 1953. (1957-)
- JOACHIM F. WOHLWILL, Ph.D., Assistant Professor of Psychology. A.B., Harvard College, 1949; Ph.D., University of California, 1957. (1958-)
- PETER H. WOLFF, M.D., Lecturer in Psychology. M.D., University of Chicago, 1950. (1961-)
- WALTER F. WOOD, Ph.D., Lecturer in Geography. Ph.D., University of Wisconsin, 1951. (1960-61)
- ALLAN M. ZWICKEL, Ph.D., Assistant Professor of Chemistry. A.B., Cornell University, 1956; Ph.D., University of Chicago, 1959. (1961-)

Trustees

Frank L. Adams (1938-)	Fort Lauderdale, Fla.
Howard M. Booth (1939-)	Worcester, Mass.
Harry C. Coley (1948-)	Worcester, Mass.
Francis H. Dewey, Jr. (1934-)	Worcester, Mass.
Samuel H. Dolbear, Vice Chairman (1940-)	New York, N. Y.
Roland A. Erickson (1951-)	Worcester, Mass.
A. D. Ross Fraser (1960-)	Rome, N. Y.
Raymond T. Gifford, Treasurer (1947-)	Worcester, Mass.
Jacob Hiatt (1955-)	Worcester, Mass.
John Jeppson, Chairman (1948-)	Worcester, Mass.
Robert H. Loomis (1936-)	West Newton, Mass.
Richard W. Mirick, Secretary (1957-)	Worcester, Mass.
Joseph C. Molder (1954-)	Worcester, Mass.

Elected to Represent the Alumni (Four-year term)

Edward B. Peck (1957-61)	Elizabeth, N. J.
Alanson W. Parkes (1958-)	Boonton, N. J.
David R. Porter (1959-)	Wellesley, Mass.
J. Warren Nystrom (1960-)	Arlington, Va.
Clyde F. Benner (1961-)	Summit, N. J.

Academic and Administrative Officers

Howard B. Jefferson, Ph.D., *President*

Robert I. Anderson, M.D., *Medical Director*

Robert W. Baker, Ph.D., *Director, Psychological Clinic*

Tilton M. Barron, B.L.S., *Librarian*

Henry C. Borger, Jr., Ph.D., *Dean of Students*

John A. Burgess, B.A., *Editor, News Bureau*

Robert F. Campbell, Ph.D., *Dean of the College*

James M. Coffee, Ed.D., *Director, Guidance and Placement Bureau*

Lydia P. Colby, *Registrar*

Samuel J. Corbitt, *Director, Food Services*

Richard J. Courtney, B.S. in B.A., *Manager, University Bookstore*

Thomas J. Dolphin, A.B., *Director, The Evening College*

Joseph Germain, *Superintendent, Buildings and Grounds*

Raymond T. Gifford, B.A., *Treasurer*

Sherman S. Hayden, Ph.D., *Secretary of the Graduate Board*

Mary A. Hubbard, *Bursar*

M. Hazel Hughes, M.Ed., *Dean of Women*

Robert M. Hyde, A.M., *Vice President*

George M. Joseph, M.D., *Medical Director*

George H. Merriam, Ph.D., *Director of Admissions*

David L. Murphy, B.A., *Assistant to the President*

John L. Roche, M.Ed., *Assistant Director of Admissions, College Financial Aid Officer*

Patrick V. Sheehan, B.S. in B.A., *Assistant Treasurer*

Henry L. Signor, B.A., *Alumni Secretary*

Roger C. Van Tassel, Ph.D., *Director, The Summer School*

Appointments from Graduate Funds, 1960-61

Alumni Association Fellow

Richard C. Wiles, Economics. B.A., Boston College, 1957; M.A. *ibid*, 1958.

George S. Barton Scholar

Louis R. Bisceglia, History. B.S., Lamar State College of Technology (Texas), 1960.

Eliza D. Dodge Scholar

Edward Van Roy, Economics. B.B.A., Clark University, 1960.

Joseph F. Donnelly Fellows

Donald W. Griffin, Geography. B.S., Illinois State Normal School, 1955; M.S. *ibid*, 1956.

Frank E. Clarkson, Psychology. B.A., Middlebury College, 1955; M.A., Clark University, 1957.

Toshio Iritani, Psychology. B.A., Tokyo University, 1955; M.A. *ibid*, 1957.

Hyoung-Man Kim, Chemistry. B.S., Seoul National University, 1957.

John M. Matuszek, Jr., Chemistry. B.S., Worcester Polytechnic Institute, 1957.

Richard J. Hraby, Economics. A.B., Baldwin-Wallace College, 1951; M.A., University of Virginia, 1952.

John O. Iatrides, History. A.B., Ohio Wesleyan, 1953; M.A., University of Michigan, 1954.

John White Field Fellow

Stephen J. Canner, Economics. B.A., Northeastern University, 1959.

Austin S. Garver Scholars and Fellows

John C. Lowe, Geography. B.A., George Washington University, 1958; M.A., *ibid*, 1960.

Csaba Sziklai, Psychology. University of Law and Political Sciences, Szeged, Hungary, 1953-56; University of Hamburg, Hamburg, Germany.

John F. McManus, Education. B.A., College of the Holy Cross, 1960.

George E. Myers Scholar

Cynthia MacRitchie, Education. A.B., Clark University, 1960.

Charles H. Thurber Scholar

Carol R. Harting, History. A.B., Anderson College, 1960.

TEACHING ASSISTANTS, 1960-61

- Melvin I. Barton, Psychology. B.A., College of the City of New York, 1957; M.A., 1959.
Leonard S. Becker, Jr., Sociology. A.B., Cornell University, 1960.
Richard J. Blasco, Biology. B.A., University of Connecticut, 1957.
George A. Blondin, Chemistry. A.B., Assumption College, 1956.
Theodore A. Bohigian, Chemistry. A.B., Clark University, 1960.
Lindsay Boyd, International Relations. B.A., University of Massachusetts, 1949; M.A., University of Maryland, 1950.
Nelson M. Butters, Psychology. A.B., Boston University, 1960.
Stephen J. Canner, Economics. A.B., Northeastern University, 1959.
Phoebus M. Christopher, Chemistry. A.B., Rutgers University, 1949; M.S., Chemical Engineering, Newark College of Engineering, 1952.
Leonard Cirillo, Psychology. A.B., City College of New York, 1958.
Robert A. Condrate, Chemistry. B.S., Worcester Polytechnic Institute, 1960.
Thomas J. Cramton, Mathematics. B.A., Harvard University, 1960.
Bruce Denner, Psychology. B.S., City College of New York, 1960.
Elwood K. Ede, Mathematics. A.B., Clark University, 1960.
Joseph A. Glick, Psychology. B.A., Brandeis University, 1956; M.A., Clark University, 1959.
Marion Glick, Psychology. B.A., Drew University, 1959.
Nancy E. Henry, Chemistry. A.B., Clark University, 1960.
Vera Shiang Hsiung, Biology. B.S., National Taiwan University, 1951.
Harold N. Kellner, Psychology. B.S., Howard University, 1959.
Jonas Langer, Psychology. B.A., City College of New York, 1957; M.A., Clark University, 1959.
Daniel R. MacGilvray, Government. B.S.Ed., Gorham State Teachers College, 1957; M.A., Clark University, 1958.
Patricia Anne Manco, Biology. B.A., University of Bridgeport, 1959.
Charles H. Nelson, Chemistry. A.B., Clark University, 1960.
Donald H. Norton, History. B.A., University of Connecticut, 1958; M.A., 1959.
Richard V. Olson, Mathematics. B.S., Worcester Polytechnic Institute, 1954.
George Rand, Psychology. B.S., City College of New York, 1959.
Paul S. Rosenkrantz, Psychology. A.B., Springfield College, 1958; M.A., Clark University, 1960.
Melvyn Schnall, Psychology. B.S., Union College, 1959.
Lucinana Simor, Psychology. Diploma, University of Budapest, 1954; M.A., New York University, 1959.
Samuel E. Stayton, Psychology. B.A., University of Kansas, 1957; M.A., Clark University, 1958.
Hedwig Szynalska, Biology. B.A., University of Bridgeport, 1959.
Chuen-Mo To, Biology. B.S., Taiwan Normal University, 1959.
John Walsh, Psychology. B.S., Fordham University, 1957; M.A., Clark University, 1959.
James Wightman, Economics. B.S., Franklin and Marshall University, 1954; M.A., Clark University, 1956.

Academic Boards and Committees, 1960-61

The President and Vice President are *ex officio* members of all boards and committees.

University Senate: President (chairman), K. Anderson, Beck (On leave, 1st semester, 1960-61), Campbell, Jones, Jordan, Kegeles (2nd semester, 1960-61), Lee, Martell (1st semester, 1960-61), Maxwell (On leave, 2nd semester, 1960-61), Nunnemacher, Reid (On leave, 2nd semester, 1960-61), Roope, Van Valkenburg, Wapner.

Committee on Personnel and Organization: President (chairman), Dean of the College, Reid (vice chairman and secretary) (On leave, 2nd semester, 1960-61), Beck (On leave, 1st semester, 1960-61), Jordan, Lee, Sugihara, Wapner.

Administrative Committee: Dean of the College (chairman), Borger, Hughes, Merriam, Sheehan.

Graduate Board: President (chairman), Lee (secretary), Gorenstein (On leave, 1960-61), Gwinn, Sherman Hayden (On leave, 2nd semester, 1960-61), Jones, Jordan, Kegeles, Maxwell (On leave, 2nd semester, 1960-61), Melder, Murphy, Nunnemacher, Roope, Sugihara, Van Valkenburg, Wapner.

Credentials Committee: Van Valkenburg (chairman), Lee (secretary), Jones, Kegeles, Maxwell (On leave, 2nd semester, 1960-61), Wapner.

Committee on Proficiency in Foreign Languages: Arndt, Reid (On leave, 2nd semester, 1960-61), representative of student's major department.

Academic Council: Dean of the College (chairman), Beard, Beck (On leave, 2nd semester, 1960-61), King (2nd semester, 1960-61), Nicholson (2nd semester, 1960-61), Nunnemacher, Reid (On leave, 2nd semester, 1960-61), Roope, Wapner.

College Board: Dean of Students (chairman), Dean of the College, Dean of Women, Coffee, Cowardin, Seymour Hayden, Jordan.

Committee on Admissions: Merriam (chairman), Dean of the College, Dean of Students, Dean of Women, Barlow, Cunningham, Sherman Hayden (On leave, 2nd semester, 1960-61), Nicol, Reynolds, Roche.

Committee on Athletics: Warman (chairman), Borger, Granger, Hughes, Maxwell (On leave, 2nd semester, 1960-61), Stubbe.

Committee on Scholarships: Sherman Hayden (chairman) (On leave, 2nd semester, 1960-61), Barron, Borger, Campbell, Merriam, Roche, Van Tassel (acting chairman, 2nd semester).

Library Committee: Cohen (chairman), K. Anderson, Gorenstein (On leave, 1960-61), Ahmadjian.

Summary of Enrollment for 1960-61

Undergraduates

	<i>Men</i>	<i>Women</i>	
Freshmen	174	96	
Sophomores	138	80	
Juniors	148	81	
Seniors	92	51	
	<i>Men</i>	<i>Women</i>	<i>Total</i>
Total Undergraduates	552	308	860
Graduate Students	182	63	245
Special Students	16	18	34
Evening College (enrolled in day college)	2	4	6
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TOTALS—Men's College, Women's College and Graduate School	752	393	1145
1960 Summer School	319	125	444
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Total Students	1071	518	1589
Less Duplications	111	47	158
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Net Totals	960	471	1431
Evening College*			
Fall Term 1960	570	281	851
Spring Term 1961	539	260	799

*Does not include those enrolled for non-credit courses.

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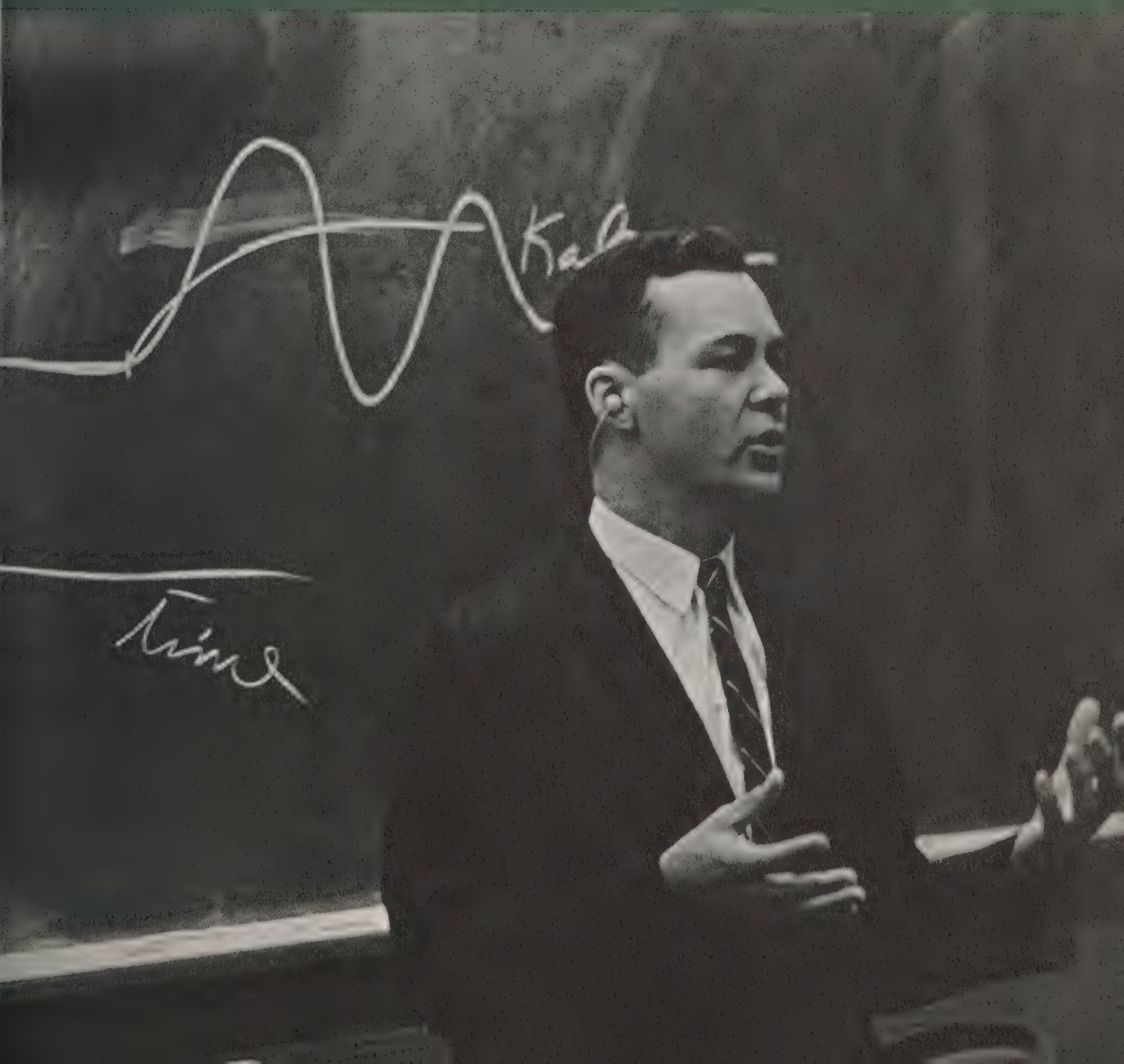
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Clark

UNIVERSITY BULLETIN

GENERAL CATALOG 1962/1963



Clark University Bulletin

WORCESTER 10, MASSACHUSETTS

General Catalog 1962/63



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<i>General College Affairs:</i>	Dr. Robert F. Campbell, Dean of the College
<i>Admission to the College:</i>	Dr. George H. Merriam, Director of Admissions
<i>Undergraduate Financial Aid:</i>	Mr. John L. Roche, College Financial Aid Officer
<i>Graduate School Affairs:</i>	Dr. Dwight E. Lee, Dean of the Graduate School
<i>Admission to the Graduate School:</i>	Dr. Dwight E. Lee, Dean of the Graduate School or Chairman of the Graduate Department concerned
<i>Evening College Affairs:</i>	Mr. Thomas J. Dolphin, Director
<i>Summer School Affairs:</i>	Mr. Thomas J. Dolphin, Director
<i>Alumni Affairs:</i>	Mr. Henry L. Signor, Alumni Secretary
<i>Records and Transcripts:</i>	Mrs. Lydia Colby, Registrar
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CALENDAR 1963

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Academic Calendar for 1962-63

1962

Tuesday, September 11
Monday, September 17
Tuesday, September 18
Friday, October 12
Thursday, November 1

Monday, November 12
Wednesday, November 21
Monday, November 26
Wednesday, December 19

Freshman orientation begins.
Upperclass registration.
First classes.
Columbus Day. Not a holiday.
Last day for receiving applications for admission to candidacy for the degree of Doctor of Philosophy in June, 1963.
Mid-semester reports due at Registrar's Office at 9 a.m.
Beginning of Thanksgiving recess at close of classes.
Thanksgiving recess ends at 8:30 a.m.
Beginning of Christmas recess at close of classes.

1963

Thursday, January 3
Tuesday, January 15
Wednesday, January 16
Thursday, January 17
Saturday, January 26
Monday, February 4
Tuesday, February 5
Friday, February 8

Friday, February 22
Monday, March 25
Saturday, March 30
Monday, April 8
Friday, April 19
Monday, May 13

Monday, May 20
Monday, May 20
Tuesday, May 21
Wednesday, May 22
Thursday, May 30
Sunday, June 9
Monday, September 16

End of Christmas recess at 8:30 a.m.
No classes.
No classes.
Semester examinations begin.
Mid-year recess begins at close of examinations.
Second semester registration.
Second semester classes begin.
Last day for receiving applications for admission to candidacy for the degrees of Master of Arts and Master of Arts in Education in June, 1963.
Washington's Birthday. Not a holiday.
Mid-semester reports due at Registrar's Office at 9 a.m.
Beginning of spring recess at close of classes.
End of spring recess at 8:30 a.m.
Patriot's Day. Not a holiday.
Dissertations for the degree of Doctor of Philosophy due at Registrar's Office at 9 a.m.
Theses for degrees of Master of Arts and Master of Arts in Education due at Registrar's Office at 9 a.m.
No classes.
No classes.
Semester examinations begin.
Memorial Day. A holiday.
Commencement Day.
Upperclass registration for 1963-64.





THE INSTITUTION

General Information

<i>President:</i>	Dr. Howard B. Jefferson
<i>Corporate Name:</i>	Trustees of Clark University
<i>Incorporation:</i>	1887
<i>Function:</i>	Independent university of liberal arts and business administration for men and women
<i>Degrees Conferred:</i>	Bachelor of Arts Bachelor of Science in Business Administration Bachelor of Science in General Studies Master of Arts Master of Arts in Education Master of Business Administration Doctor of Education Doctor of Philosophy
<i>Enrollment:</i>	1100
<i>Faculty:</i>	79
<i>Endowment:</i>	Book Value: \$7,373,000 Market Value: \$11,363,000
<i>Library:</i>	235,000 volumes 50,000 maps and charts







History of the University

In February of each year, Clark University celebrates Founders' Day. This custom commemorates the beginning of the University chiefly through the efforts of two men, Jonas Gilman Clark, a sagacious merchant and businessman for whom the University is named, and Dr. Granville Stanley Hall, an educator of breadth and vision.

Mr. Clark, a native of Worcester environs, became wealthy during the California Gold Rush by supplying miners and others with manufactured goods. He increased his personal fortune through wise business dealings initiated after his return to the East at the end of the Civil War. He later returned to Worcester where he established a residence and became interested in civic affairs. It was during this period of his life that he decided to endow an institution of higher learning. His last years were largely devoted to the project. In this, he was assisted by his wife, Susan, and a group of prominent Worcester citizens, including George F. Hoar, a United States Senator from Massachusetts, and General Charles Devens.

In 1887, the Trustees of Clark University were incorporated. Construction started that year on a main building, known today as Jonas G. Clark Hall, and the Science Building. Dr. Hall was appointed the first president of the university. He had been a professor of philosophy, psychology, and education at The Johns Hopkins University and had already established his reputation as a vigorous and original scholar.

Recognizing the need for graduate institutions in the United States (there was at that time only one titled graduate school in the United States—The Johns Hopkins University), President Hall began the organization of an educational institution which would be solely concerned with graduate study and research. As a result, Clark University became the second graduate school established in the United States and for 13 years operated only as a graduate school.

This unusual educational idea attracted the attention of a number of brilliant and original scholars who, upon President Hall's urging, joined the Clark University faculty. They constituted one of the most outstanding communities of scholars this country had then seen. The first students entered the university in 1889 and its first graduates received diplomas in 1891. In 1900, Clark University was one of the 14 charter members of the Association of American Universities. The brilliance of both teachers and students soon established the scholarly reputation of the university.

While Mr. Clark supported President Hall's concept of graduate education, he was also interested in an undergraduate college for men and particularly those men who had limited financial resources. Accordingly, a codicil to his will, effective upon his death in 1900, provided for an undergraduate college with a three-year curriculum.

In compliance with the codicil, the trustees established Clark College. It was to have an administration and faculty distinct from those of the graduate school. Carroll Davidson Wright, then serving as the first United States Commissioner of Labor, was selected as the first president of Clark College. Rufus C. Bentley was named by the trustees as the first Dean of Clark College.

From its beginning, Clark College had an educational philosophy which was marked by seriousness of purpose and hard work. Inasmuch as the bachelor's degree was granted after three years of study, as opposed to the more common four-year curricula of the day, the student carried a heavy program of study. There were intramural contests rather than intercollegiate sports and extra-curricular activities were at a minimum. Though entrance requirements were informal, a high standard of performance was necessary to remain in college.

The educational program formulated for Clark College by President Wright and Dean Bentley complemented the already-established program of the graduate school. It was only a matter of time before the undergraduate college and



the graduate school, then associated but distinct, became one educational and administrative unit.

President Wright, who died in 1909, was succeeded by Edmund Clark Sanford, a professor of psychology in the graduate school. President Hall resigned in 1920 and President Sanford felt the time was ripe to unite the undergraduate college and graduate school. He resigned from the presidency to return to teaching and scholarship, leaving the field open for reorganization of the two entities under a single president. This the trustees decided to do and cast about for a man who would become the president of Clark University, which henceforth would include both the graduate and the undergraduate divisions.

In 1920, Walter Wallace Atwood, a professor of physiography at Harvard University, was selected by the trustees as president. During his tenure, there were significant changes in both the educational program and the physical plant. There was a reorganization of the graduate school and undergraduate college faculties and administrations into a single unit. The three-year curriculum leading to the bachelor of arts degree was increased to four years. The Graduate School of Geography was founded. Participation in intercollegiate activities, including athletics was encouraged. Additions to the physical plant included a men's dormitory, an athletic field, a gymnasium, a library tower and an auditorium. The latter was named Atwood Hall in honor of the president.

In 1941, the Division of Business Administration was established. Also, in 1941, Clark University became co-educational when the trustees voted to start the Women's College of the university.



President Atwood retired in 1946 after 26 years in office. His successor was Howard Bonar Jefferson, a professor of philosophy and Director of the School of Philosophy and Religion at Colgate University.

Under the vigorous leadership of Dr. Jefferson, the university has continued to take great strides. The undergraduate curriculum has been enriched by the addition of a Department of Philosophy and the introduction of a series of general education courses. In 1953, a chapter of Phi Beta Kappa, the national liberal arts honor society, was established at Clark University. Courses in mathematics leading to the master's degree were re-established.

In 1953, The Evening College of Clark University was organized as an institution for adult learning. It provides university education for adults and offers an opportunity for persons to earn a bachelor's degree exclusively by evening study. In addition, it frequently organizes non-credit courses, institutes and seminars as a community service. In 1962, a program leading to the degree of Master of Business Administration was started by The Evening College.

In 1958, the Institute of Human Development was established as an adjunct of the Department of Psychology. A center of psychological study, its purpose is to develop an all-inclusive concept of human development.

During Dr. Jefferson's tenure, the university has almost doubled its physical plant. A new chemistry laboratory was opened in September, 1958. In the following year, two new dormitories and a student center were opened. The student center was named in honor of Dr. Jefferson. In addition, the university has pur-

chased a number of buildings for use as dormitories, faculty apartments and a conference center.

Today, one can receive instruction leading to the degree of Doctor of Philosophy in biology, chemistry, chemical physics, economics, geography, history and international relations, and psychology. A Doctor of Education degree is also offered. Master's degrees can be obtained in these fields and also in business administration, government, mathematics, physics, and sociology. The undergraduate may take courses in these fields and, in addition, in classics, English, fine arts, geology, German, music, philosophy, and Romance languages.

Worcester and the University

When plans for the new university were taking shape in Mr. Clark's mind, he enlisted the aid of a group of far-sighted and influential Worcester citizens from whom, later, the majority of his original board of trustees was chosen. In this was set a pattern for cooperation between the university and the community which has persisted throughout the history of the institution.

The intellectual life of the city has been strengthened by the contributions of the faculty and of distinguished guests whom the university has brought to Worcester. Members of the staff have served local institutions both public and private in many ways, and the Clark Fine Arts series has helped to enrich the cultural life of Worcester.

The college has opened the door to higher education for hundreds to whom the opportunity would have been denied if they had been forced to seek it elsewhere. The Graduate School has aided more gifted students to proceed to the highest levels of intellectual endeavor. Particularly noteworthy has been the service to teachers in the public school system. Finally, the Evening College has greatly widened educational opportunities in the community.

In turn, the university has benefited by the support, both financial and intangible, which it has received from the citizens of Worcester. The interchange of services and ideas with the staffs of other Worcester institutions and the opportunity to use their libraries on a reciprocal basis have been invaluable.

There is particularly close cooperation between the Department of Fine Arts and the Worcester Art Museum, between the Department of History, Government and International Relations and the American Antiquarian Society, between the Department of Chemistry and the Worcester Foundation for Experimental Biology, and between the Department of Psychology and the Worcester State Hospital. The Worcester Public Library and the Clark University Library cooperate by avoiding duplication in the coverage of certain subjects and by a corresponding widening of the coverage in the fields assigned to each.

The university is conscious that it is a part of the community and that, as such, it has both obligations and benefits. Its steadfast purpose is to strengthen the bonds of mutual interdependence and cooperation.

The Campus

UNIVERSITY CAMPUS

Clark is an urban institution situated close to the heart of Worcester. Its educational and administrative activities are located on a compact campus near a major city park and city transportation lines. On adjacent properties facing the campus are University dormitories, apartments, infirmary and the residences of the President and Dean of Students. Clay tennis courts and a running track are nearby as well as a larger athletic field, used for soccer and baseball. A number of other University residences and centers are located near campus. In addition, the University owns a tract of nearly 20 acres, known as the Hadwen Arboretum, a few miles from campus. Nearby colleges include Worcester Polytechnic Institute, Assumption College and the College of the Holy Cross. The famed Worcester Art Museum is also located nearby. The first building erected on the campus was Jonas G. Clark Hall, a four-story granite and brick structure in the center of the campus. It houses the offices of the Deans, Registrar, Bursar and Treasurer as well as those of the Evening College, Summer School, Placement Office, Psychological Clinic and Admissions Office. In addition, it contains many of the offices and classrooms of the departments of instruction, the Women's Gymnasium, Language Laboratory, and the Institute of Human Development—an adjunct of the Psychology Department. Clark's second oldest building is the Science Building, site of experimentation by Dr. Robert H. Goddard, "father of the space age," and Dr. Albert A. Michelson, America's first Nobel Prize win-

CLARK HALL

SCIENCE BUILDING





JEPPSON
LABORATORY

UNIVERSITY
LIBRARY

LIBRARY TOWER

ATWOOD HALL

GEOGRAPHY
BUILDING

ESTABROOK
HALL

MEN'S
DORMITORY

ner. One wing of the building and a portion of its midsection has been remodeled to provide new research and instruction facilities for the Biology Department. The opposite wing of the same building also has undergone a less intensive remodeling for the Physics Department. Between these two oldest Clark buildings is one of its newest—Jeppson Laboratory. Completed in 1958, this building has completely modern research and instruction facilities for the Chemistry Department. It contains Johnson Hall, a multipurpose lecture hall seating 174 persons, and Kraus Library, specializing in chemical periodicals. Standing at the opposite corner of the main campus is the University Library, which, besides its large book collection, has one of the most extensive geographical map and chart collections in the United States. The building also has a music room and language center with appropriate records and literature. Attached to the north end of the University Library is the Library Tower, built in 1939 to provide space for the growing library collection. An elevator offers access to eight levels of stacks in the tower. The lower portion of the tower contains the stage of Atwood Hall, an 800-seat auditorium used for student assemblies, lectures, concerts and other University functions. Atwood Hall also contains the Blue Room for smaller lectures and meetings, and the offices and classrooms of the Fine Arts Department. Site of America's first and only Graduate School of Geography, this building also contains the offices of the President, Vice President and other administrative officers. It also contains the editorial offices of *Economic Geography*, a quarterly publication of Clark University. The Music Department is located in newly-remodeled facilities in Estabrook Hall containing practice and seminar rooms as well as offices of instruction. Estabrook Hall also has dormitory rooms for male students and offices for student organizations. Most male students living on campus are quartered in the Men's Dormitory. Completed in 1959, this fire-proof dormitory has rooms for 201 men with formal lounges and recreation room for their leisure



BUILDINGS AND PROPERTY

- 1. JONAS CLARK HALL
- 2. ATWOOD HALL
- 3. LIBRARY
- 4. GEOGRAPHY BUILDING
- 5. STUDENT UNION
- 6. ALUMNI GYMNASIUM
- 7. PHYSICS
- 8. JEFFERSON LABORATORY
- 9. NEW WOMEN'S DORM
- 10. PRESIDENT'S HOME
- 11. DEAN'S HOME
- 12. FACULTY HOME
- 13. NEW MEN'S DORM
- 14. NEW WOODCOCK HALL
- 15. UNIVERSITY APARTMENTS
- 16. INFIRMARY
- 17. UNIVERSITY BUILDING
- 18. UNIVERSITY BUILDING
- 19. FACULTY HOME
- 20. FACULTY APTS & CONFERENCE CENTRE
- 21. FACULTY AND STUDENTS APTS
- 22. APTS & HUSBERRY SCHOOL
- 23. UNIVERSITY BUILDINGS
- 24. UNIVERSITY BUILDING

CLARK PROPERTY
 PRIVATE PROPERTY

WOMEN'S
DORMITORY
ALUMNI
GYMNASIUM

JEFFERSON
HALL

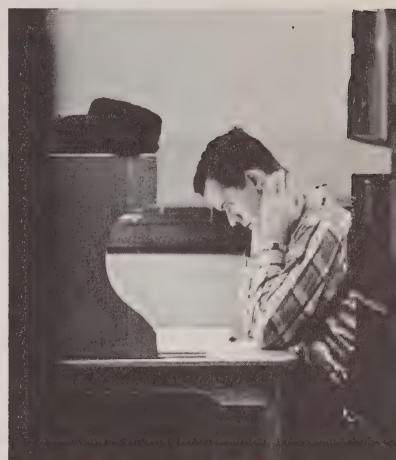
UNIVERSITY
APARTMENTS

CONFERENCE
CENTER

GRADUATE
HOUSE

time. The Women's Dormitory, also completed in 1959, is similar in design to the Men's Dormitory. It houses 137 women students and also has formal lounges and recreation rooms. The Alumni Gymnasium, one of Clark's pre-war buildings, possesses a gymnasium seating 800 persons and shower and locker facilities for intramural and intercollegiate athletics. The offices of the Department of Physical Education are there. On the second floor is the Alumni Office and Alumni Lounge, a comfortable meeting room for University organizations. Another newly-constructed building is the Student Center—Jefferson Hall. Opened in 1959, Jefferson Hall contains the University Dining Hall and snack bar, faculty and student lounges, a recreation room, student mail boxes and the University Bookstore. Another dormitory unit is the University Apartments, purchased in 1959. The building is used for women undergraduates and, in the past, it has contained apartments for married faculty and staff members. Near the main campus is the Conference Center, originally the site of the Institute of Liberal Studies for Executives but now used for university meetings and functions. The University purchased a large private home in 1961 and has converted it into a Graduate House, a dormitory for graduate students. This contains living quarters for graduate students as well as a comfortable lounge and kitchen facilities. A number of other private homes near the campus have been purchased in recent years to provide housing for married graduate students and faculty members.





The Library

Tilton M. Barron, *Librarian*

Marion Henderson, *Reference Librarian*

Elizabeth Hassinger, *Catalog Librarian*

Valerie Lein, *Circulation Librarian*

The Clark University Library contains over 235,000 volumes and some 50,000 maps and charts. The major part of the collection is centrally housed, and an open shelf system fosters free access to books and periodicals for student and scholar. Chemistry periodicals are available for reference at the Kraus Library—Jeppson Laboratory. To stimulate reading skill and to acquaint the student with the contemporary culture of foreign lands, a collection of foreign newspapers and periodicals is maintained in a Language Center, an adjunct to the modern electronic language laboratory.

The collection reflects the history and growth of the University. The combined scholar's library of the early graduate school and the undergraduate library of Clark College have been developed through the years to serve the academic needs of Clark University. The richest holdings are in the fields in which graduate work is offered—geography, psychology, biology, chemistry, physics, mathematics, economics, and history and international relations. More characteristically undergraduate in content are the collections dealing with music, fine arts, language, literature, religion, and philosophy. The Library pays particular attention to major bibliographical and reference tools, and currently receives over 1000 periodicals.

A music library of recordings contains a collection of classical and standard musical works. There is also a listening room in the building.

The Clark University Library coordinates its acquisition of new material, and exchanges material, with other libraries in the Worcester area.

The University Looks to the Future

At a time when higher education is confronted with unprecedented challenges in meeting the nation's needs, Clark University faces the future with comprehensive, thoughtful plans and an ambitious program for their achievement. In establishing ten-year objectives for the University, trustees, faculty, alumni and friends have been aware both of Clark's unusual history and traditions, and the critical national need for expanded educational services and facilities. Reflecting these considerations, Clark's goal is to hold steadfast to its traditions as a university concerned with scholarship of the highest possible order, and offering graduate work to and beyond the doctorate in selected fields of study. Too, the University aims to preserve—and enhance—the unusually close relationship which exists between undergraduate and graduate education at Clark, thus maintaining one of its most unique features: an intellectual atmosphere which combines the spirit of creative discovery found in the large university with the intimate, personal relationships which are found in the small liberal arts college. Finally, while continuing to foster the values of smallness in every possible way, the University will undertake planned and limited expansion to an enrollment of not more than 1500 students by 1972, the year in which it will celebrate the 85th anniversary of the granting of its charter.

For the achievement of these goals, the trustees have established *The Clark Program*, a comprehensive ten-year development effort whose objective is to secure nearly \$21 million in new resources by 1972. Of the total sought, twelve million will be required to support endowed professorships, faculty salaries, scholarships, fellowships and special programs to enrich the educational experience at Clark. The remaining \$8,800,000 will be utilized to realize the first phase of Clark's *Campus of Tomorrow*, a long-range plan for total campus development. Principal goals for campus development in the next decade include a new University library, a new residential quadrangle to provide superior living and dining facilities for nearly 400 students, and the acquisition of property to expand the boundaries of the campus and provide additional parking facilities.

The Clark Program is the largest undertaking of its kind in the University's history—a program rooted in conviction about the importance of what higher education means at Clark, and undertaken with confidence that success will be achieved.



THE UNDERGRADUATE COLLEGES



**CLARK
COLLEGE**

Clark College, the undergraduate men's division, and the Women's College constitute the primary undergraduate divisions of the University. Educationally they operate as a unit, and admission and degree requirements are identical in the two colleges. Both offer academic programs in the liberal arts and in business administration.

LIBERAL ARTS

The liberal arts program provides for breadth of knowledge and understanding together with the intellectual discipline resulting from concentration in a selected field of special interest. The program, leading to the degree of Bachelor of Arts, possesses a large degree of flexibility permitting adaptation to a wide variety of individual interests.

**BUSINESS
ADMINISTRATION**

Fundamental skills as well as broad professional training are offered through the business administration program. Breadth is assured by prescribing required courses in basic subjects and selected functional areas of business activity. Professional specialization is assured by requiring the student to select an area of concentration. Cultural background is available to the student by allowing him to freely elect part of his program from courses in the arts and sciences. The areas of concentration are accounting, economics, finance, marketing, management, and personnel administration. The program leads to the degree of Bachelor of Science in Business Administration.



Admission

ADMISSION	Clark University welcomes applications for admission from young men and women of scholastic ability and seriousness of purpose who are prepared to join wholeheartedly in the life of an intellectual community. The selection is on a competitive basis and all applicants are subject to final approval by the Admissions Committee.
CLASSIFICATION OF STUDENTS	<p>The University accepts four classes of students:</p> <p><i>Undergraduates:</i> Candidates for the degree of Bachelor of Arts or Bachelor of Science in Business Administration in the undergraduate colleges.</p> <p><i>Graduate Students:</i> Candidates for the degree of Master of Arts, Master of Arts in Education, Doctor of Education or Doctor of Philosophy. For further information, see the section entitled "Graduate School."</p> <p><i>Special Students:</i> Persons, not prospective degree candidates, who wish to take advantage of the opportunities for study provided by the University and who give satisfactory evidence of adequate preparation for the work which they wish to undertake.</p> <p><i>Summer School and Evening College Students:</i> Persons who may wish to be candidates for a degree or who may wish to take advantage of the opportunities for study provided by the Summer School or The Evening College.</p> <p><i>Auditors:</i> In addition to the above four classes of students, auditors, registered for attendance but not for credit, may be admitted at the discretion of the administrative officers of the University. They pay the regular tuition rates but are not enrolled as students and do not pay the matriculation fee.</p>
WITHDRAWAL	The University reserves the right to require the withdrawal at any time of any student or auditor whose record in either conduct or scholarship fails to meet the expectations implied by his admission.
APPLICATIONS	Applications to the Colleges should be prepared carefully and must be accompanied by the applicant's scholastic record and a

non-returnable application fee in order that the application receive consideration. Formal application should be made at the earliest possible date during the applicant's final year in secondary school.

REQUIREMENTS The completion of a four-year high school program or its equivalent, including 16 acceptable units of credit, is normally required for admission to the freshman class. The term "unit" means a course of study in one subject taken through a school year. An applicant must furnish official records from all preparatory schools attended.

Subject-Matter Requirements: The subject-matter requirements for admission to the freshman class are as follows:

Required Subjects, 8 units

English	4 units
Mathematics (algebra and geometry) (Applicants expecting to specialize in science are advised to present at least three units of mathematics.)	2 units
Foreign Language (in one language) (In view of the language requirement for the A.B. degree, it is strongly urged that an applicant present more than two units in one foreign language.)	2 units

Restricted Electives, 5 or more units in addition to the 8 units of required subjects

Mathematics	1 or 2 units
Foreign Language (A single "beginning unit" in a foreign language is not acceptable.)	1 to 4 units
Social Studies (history, government, civics, etc.)	1 to 3 units
Natural Sciences (physics, chemistry, etc.)	1 to 3 units

Free Electives, not more than 4 units

Subjects recognized by the applicant's preparatory school in its regular program, at the discretion of the Admissions Committee.

College Entrance Examination Board: All applicants must take the Scholastic Aptitude Test of the College Entrance Examination Board. This test may be taken in December, January or March of the applicant's senior year in secondary school. In addition, applicants are required to submit a writing sample taken under controlled conditions. This requirement may be met by

participation in the College Entrance Examination Board's December, January or March administration of such a controlled writing sample. Applicants are also required to take the Achievement Tests of the College Entrance Examination Board in Mathematics and Foreign Languages in March of the applicant's senior year.

A bulletin of information concerning these examinations may be obtained from the College Entrance Examination Board. In the East, write to Post Office Box 592, Princeton, N.J.; in the Far West, write to Post Office Box 9896, Los Feliz Station, Los Angeles 27, Cal.

Scholastic Quality Requirements: In addition to the Scholastic Aptitude Test of the College Entrance Examination Board, certification by the principal of the student's secondary school in at least 14 of the 16 required units is normally necessary. An exception may be made if the applicant ranks in the upper quarter of the class with which he graduated.

ADMISSION
WITH
ADVANCED
STANDING

An applicant for admission who has attended another institution of college grade is required to submit a letter of honorable dismissal, a complete transcript of his academic record at the institution last attended, his high school transcript and such other information as the Admissions Committee may request. No application can be considered for admission until all transcripts have been received. Tentative evaluation of credits for courses of college grade completed elsewhere will be made at the time of a student's first registration at Clark and will be used in planning his course program and in classifying him provisionally as a freshman, sophomore, junior or senior.

Students admitted with transfer credits will be regarded as on probation during their first semester. Definite recording of the credit tentatively evaluated will be made only if (a) a satisfactory semester record—no more than one D in a four- or five-course program—is attained in the first or second semester of residence; and (b) the records of the student's first two semesters are both non-probationary. When a transcript has been accepted by the student concerned, no further revision of the amount of credit will be considered.



Transfer students in the business administration program should note that (1) Business English and Business Mathematics are not accepted for credit toward the degree; (2) the University reserves the right to examine a student in any course required for the degree which is offered for transfer credit; (3) a maximum of two year-courses in one area of concentration may be accepted for transfer credit without further confirmation, and more than two courses in one area will not be accepted for transfer credit until a confirming course at a higher level has been completed at Clark with a grade of C-minus or better; (4) in no case, will transfer credit be allowed for more than four courses in any one area; and (5) in any subject in which a full year-course is required at Clark, the University may deny the transfer of credit for a half-year course in that subject.

A graduate of the three-year course of the School of the Worcester Art Museum may be admitted as a candidate for the degree of Bachelor of Arts with the rank of junior in the college. In such cases the usual admission requirements must be met and the general subject-matter requirements for the degree must be satisfied.

ADMISSION
DEPOSIT

When a student's application is complete and he has been tendered formal admission to Clark University, he will be required to indicate his acceptance of the offer of admission by making an admission deposit to hold a place for the student in the incoming class. This deposit is credited toward the charges for the first semester. The deposit is forfeited in case the student does not enroll for the specified semester. This applies to all students except graduate and special students. The deposit may also be used to reserve dormitory space.

ADMISSION
OF SPECIAL
STUDENTS

Applicants for admission as special students should address their inquiries to the Dean of Students (men) or Dean of Women and they should be prepared to supply evidence of qualification for the study they wish to undertake.

ADMISSION
OF FOREIGN
STUDENTS

Application from foreign students will not be considered if received after May 1. Foreign students whose native tongue is not English must be able to satisfy the university requirements for proficiency in the English language. Every foreign student must have medical insurance, preferably that of the Institute of International Education.

The Academic Programs

GROUPS

Course credit may be obtained at the undergraduate level in the following fields of instruction which, for administrative purposes, are known as "groups."

Group A. Science and Mathematics: Biology, chemistry, experimental psychology, geology, mathematics and physics.

Group B. Social Sciences: Economics, education, geography, government, history, international relations, philosophy, psychology and sociology.

Group C. Language and Literature: Greek, Latin, English, French, German, Spanish and an interdepartmental course in language and literature.

Group D. Fine Arts: Art and music.

MAJORS

A student may major in biology, business administration, chemistry, classics, economics, English, geography, German, government, history, mathematics, philosophy, physics, psychology, sociology or Romance languages. Interdepartmental majors are offered in international relations and American civilization. A major in fine arts is offered through a program given in cooperation by Clark and the School of the Worcester Art Museum. Courses but not majors are offered in education, geology and music.

GENERAL
EDUCATION

Many courses at Clark offer the student an opportunity to obtain a core of information and of ideas which will be possessed in common with many of his contemporaries and to stimulate intelligent and critical interest in fields of learning where he has no expectation of attaining professional competence. In choosing his program, the undergraduate is urged to supplement his major with courses of this character.

STUDENT
PROGRAMS

The undergraduate normally carries a program of five courses throughout the academic year. In addition, he must meet the requirement for physical education. In general, a course meets three times weekly. Laboratory periods are usually three hours long. Students should consult their faculty adviser or major department when questions of course or program selection arise.

INDUCTION

Freshmen must attend an induction program held several days before the academic year begins. After meeting initially at the University, freshmen usually spend the remainder of the induction program at a camp or hotel.



During the induction program, freshmen have an opportunity to become acquainted with their classmates as well as members of the University faculty and staff. They will also meet upper-classmen and alumni. Placement examinations and other tests will be given. Freshmen will attend individual and group conferences and will register for a program of studies.

A modified induction program is held for transfer students entering the upper classes. These students do not attend the induction programs held off-campus but they do report early to the University for testing, orientation and registration.

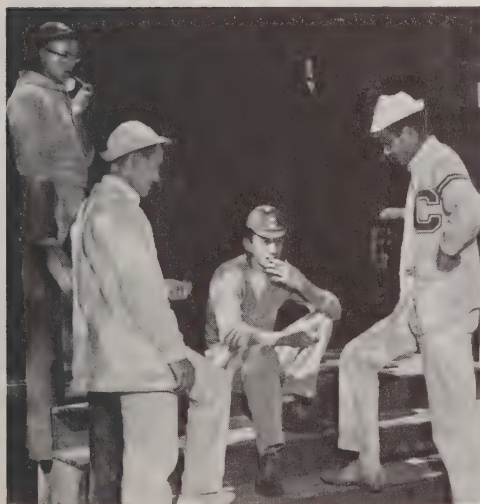
FACULTY ADVISERS

A freshman is assigned a faculty member who advises the student on a program of courses and on other matters. After the freshman year, students are encouraged to select an adviser of their own choosing. A change of advisers may be made on formal request addressed to the appropriate dean.

The adviser assists the student in choosing his program of studies and is usually available for consultation on any matter which the student may wish to discuss with him.

REGISTRATION

Each student is required to register for a detailed program of courses at the beginning of every semester. The student will be given notice in advance of the dates on which registration is re-





quired. Failure to register within the announced period is penalized by a late registration fee.

Changes in registration may be made, with the approval of the student's adviser, for a limited time after the end of the registration period. Later changes involve a formal petition to the College Board.

FRESHMAN SEMINAR

During the first several weeks of the academic year, freshmen will meet with faculty members in small groups to discuss significant books which they have been asked to read in the previous summer.

FRESHMAN PROGRAM

A freshman must choose his entire program from courses which are open to freshmen. All freshmen are required to take English 11, a Group A course, a Group B course and an elective. Candidates for the A.B. degree must also take a course in a foreign language. Candidates for the B.S. in B.A. degree must take Business Administration 100, *Principles of Accounting*.

Students who expect to major in Group A and students who are candidates for the B.S. in B.A. degree must elect Mathematics 11 or, if qualified, Mathematics 12.

Students especially qualified by preparation, performance and interest may elect a second laboratory science in place of a Group B course.

ADVANCED
PLACEMENT

Placement in advanced courses is determined by individual performance on special departmental placement examinations or, in some instances, on the Advanced Placement and Achievement Tests of the College Entrance Examination Board. College credit for certain courses completed in high school may also be granted toward the A.B. degree on the basis of the College Entrance Examination Board Advanced Placement Tests.

SOPHOMORE
PROGRAMS

A sophomore must give priority in his program to any general degree requirements which remain to be satisfied and should provide for an introduction to the field or subject in which a major is chosen. The remaining elective choices provide the student opportunity to broaden the range of his interests.

Tentative selection of a major is required of A.B. degree candidates at the time of registration for the sophomore year. Candidates for the B.S. in B.A. degree must select an area of concentration at the same time.

Sophomores may elect any course designated by a number beginning with the numeral 1, indicating the course is primarily for undergraduates. They are not admitted to courses designated by a number beginning with the numeral 2, except by permission of the College Board.

JUNIOR-SENIOR
PROGRAMS

Juniors and seniors should plan their courses carefully and in consultation with their faculty advisers. However, these students may elect any courses designated by numbers beginning with 1 or 2, indicating courses which are primarily for undergraduates or for advanced undergraduates and graduate students. The selection by juniors and seniors of these courses is subject to any conditions stated in the course description.

Under special conditions and with the approval of the College Board and the Dean of the Graduate School in each case, seniors who rank in the upper third of their class may be admitted to courses designated by numbers beginning with the numeral 3, indicating courses which are primarily for graduate students.



ACCELERATED PROGRAMS

At least three years of college study in residence is required for a bachelor's degree. A student may earn the degree in this minimum time, or in three and one-half years, provided he is prepared to make the additional effort which is required and is able to maintain the required level of scholarship.

Such accelerated programs are possible through a combination of six-course programs during the regular academic year and attendance at summer schools. Credit toward a degree for study at a summer school is granted only when it is officially recognized in advance in each individual case.

To complete the bachelor's degree requirements in three years, the student must carry a six-course program through all three years and attend two six-week summer schools. Only students of exceptional ability and in excellent physical health are advised to undertake such a program.

To complete the bachelor's degree requirements in three and one-half years, the student must accumulate in that time credit for two and one-half courses in addition to a regular program. The student can accomplish this without attending summer school if he carries a six-course program through two and one-half years. More commonly, the student will accomplish this by attending two summer schools and carrying a six-course program for one semester or by attending three summer schools.



**SIX-COURSE
PROGRAMS**

A student whose average grade for any semester is C+ or better can register for a program of six courses for the following semester.

A senior whose graduation within the academic year depends on the completion of a six-course program during that year may register for a six-course program if his average grade for the preceding semester is C- or better.

The tuition charges for a six-course program are based on a "per course" rate. See the section listing tuition and other charges.

**WASHINGTON
SEMESTER
PROGRAM**

Clark participates in the Washington Semester program of the American University in Washington, D. C. Under the program, a small number of superior students may be nominated to attend the program, usually in the junior year, studying United States government in the nation's capital. Though any student may be interested in the program, the opportunity should be particularly attractive to students majoring in government, international relations, history, economics or sociology. Full credit is given for the program toward the degree at Clark. Inquiry and application should be made to the chairman of the Department of History, Government and International Relations.

**JUNIOR YEAR
ABROAD**

In cooperation with such organizations as Academic Year Abroad, Institute of European Studies and Scandinavian Seminar, Clark offers its students the opportunity of spending their

junior year abroad. Programs of foreign study involving academic credit must have prior approval of the College Board.

PARTIAL
PROGRAMS

Under special circumstances, programs of fewer than five courses may be permitted. A student whose program is fewer than four courses is designated as a part-time student. Part-time students are excused from the requirement in physical education. Tuition charges for the program of a part-time student are based on a "per course" rate. See the section listing tuition and other charges.

SPECIAL
STUDENTS

Special students register for such programs as they agree upon in consultation with the instructors concerned. They are excused from the requirement in physical education. Tuition charges are based on a "per course" rate. See the section listing tuition and other charges.

PRE-
PROFESSIONAL
PROGRAMS

One function of the undergraduate colleges is to prepare students who intend to enter a professional school or take graduate study. Students entering Clark may gain this basic preparation through the selection of the appropriate major. A student planning a professional career should consult with his adviser as early as possible in his college career to best shape an undergraduate program.

Pre-medical, pre-dental or pre-nursing students can satisfy pre-professional requirements for entrance into a medical, dental or nursing school by taking necessary basic courses in biology, chemistry or physics. In the case of teaching, Clark offers courses necessary for state certification. It also offers a graduate program in education. For information concerning teaching requirements, consult the Education Department section under the listing of "Departments and Courses."

Pre-law students are not limited to the selection of a particular major or a fixed group of studies. Some attention to the social sciences is generally favored but not mandatory. Undergraduates headed for law schools are advised to seek a broad liberal arts education. Frederick W. Killian, associate professor of sociology and a lawyer, serves as Clark's adviser to students planning to attend law schools and is available for consultation concerning law schools, scholarships and undergraduate programs.

Requirements for a Bachelor's Degree

GENERAL REQUIREMENTS

A student in good standing who completes the requirements for either the degree of Bachelor of Arts or the degree of Bachelor of Science in Business Administration will be recommended for the appropriate degree unless, in the judgment of the College Board, there is cause for withholding the recommendation.

Residence: A student must be in residence at least three academic years. At least one full year, usually the last year before the degree is conferred, must be spent at the University. Five one-year courses must be satisfactorily completed for each year in residence.

Course Requirements: All college regulations concerned with credit toward a degree are expressed in terms of courses. A course as a unit of credit normally implies three or four class meetings or laboratory exercises per week throughout two semesters and constitutes one-fifth of a student's normal program. If fractional courses are offered, these will be combined in computing total course credits.

Undergraduates admitted to courses primarily designed for graduate students and designated by numbers beginning with the numeral 3 receive one-half course credit per semester irrespective of the number of weekly class meetings. Twenty full courses at a satisfactory level of scholarship are required for graduation.

Physical Education: A student must complete two years of physical education, two hours per week.

SPECIAL REQUIREMENTS

In addition to the general requirements for a bachelor's degree, there are specific requirements for the degree of Bachelor of Arts and for the degree of Bachelor of Science in Business Administration.

SPECIAL REQUIREMENTS BACHELOR OF ARTS

Major: A departmental major consists of seven courses designated by the department for this purpose. Four or five of these must be courses in the major subject; the remaining courses must be in fields of study closely related to the major subject. A grade

of higher than C— is required in at least 11 semester grades involved in the completion of an acceptable major.

Mathematics 11 or 12 is a freshman year requirement for all students intending to major in Group A—Science and Mathematics.

Interdepartmental Major: An interdepartmental major includes eight or more courses chosen with regard to related content and purposes in fields which cross departmental boundaries. Two such programs are now available. These will be found fully outlined in the catalog section on "Departments and Courses."

Group A—Science and Mathematics: The student must take two courses, one in each of two different fields. The two courses may not be distributed between more than two fields of study. One of them must be a laboratory science. Courses in the history of the sciences are not counted toward the fulfillment of this requirement.



Group B—Social Science: The student must take two courses, one in each of two different fields. The two courses may not be distributed between more than two fields of study.

Foreign Language: The student must take a course in a foreign language at or beyond the third-year college level. However, freshmen whose placement tests show them ready for such a third-year course may fulfill this requirement by taking two years of a second foreign language. Language study must begin in the freshman year. A student whose previous education has been in a language other than English may be relieved of the foreign language requirement upon the successful completion of the freshman English course.

English: The English requirement includes one and one-half courses, English 11 in the freshman year and an additional half-course. All students are required to maintain satisfactory proficiency in English.

Fine Arts: A half-course in fine arts or music or a year-course in a foreign civilization must be completed.





SPECIAL
REQUIREMENTS

BACHELOR
OF SCIENCE
IN BUSINESS

ADMINISTRATION

Mathematics: One course in mathematics is required.

Laboratory Science: One course in a laboratory science is required.

English: Two courses are required in English of which a half-course may be Public Speaking.

Sociology, Psychology or Government: Three courses are required in not more than two fields.

Economics: One and one-half course in economics is required.

Business Courses: Requirements include one course in accounting, one-half course in marketing, one-half course in management, one course in statistics, one-half course in Corporation Finance, and one course in Analysis of Business Problems.

Concentration: In the fields of accounting, economics and finance, management or marketing; in addition to the courses already required, the student's program shall include no less than two or more than three courses in any one field, except that the total courses in any one field shall not be less than three. For this purpose, no more than two half-courses with a grade of less than C- are acceptable.



Elective Courses: One and one-half of the remaining courses must be in the liberal arts (non-business) area.

The special requirements listed here for the degree of Bachelor of Science in Business Administration are binding upon the class entering in September, 1961. Students currently enrolled in the program or those entering with advanced standing should consult their adviser or the director of the division regarding the requirements to be met by them.

Academic Regulations

GRADES

Grades are reported for each student at the end of each semester. The grades are A—excellent; B—good; C—average; D—poor; and F—failure. The modifying symbols, plus and minus, are used with each of these letter grades, except F, giving 12 levels of passing grades. A report of incomplete is permitted only when sickness or some other unavoidable circumstance prevents the completion of a course.

A record of failure in a course is final and not subject to change on the basis of any subsequent performance of the student who is involved. Credit for a course in which a failure has been reported may be secured only by repeating the course and earning a passing grade. A record of incomplete incurred in the first semester must be made up by the end of the academic year;

if incurred in the second semester or summer term, it must be made up by midsemester of the following fall. If a course is not completed within the specified time, the record of incomplete is changed to one of failure.

SCHOLARSHIP STANDARDS	Courses with the grades of D+, D, or D- may not be counted toward a bachelor's degree beyond one-quarter of the total credit required, i.e., not more than five such courses or their equivalent in fractional courses may be counted. In consideration of this regulation only grades received and credit earned at Clark are considered.
CLASSIFICATION OF STUDENTS	A student continues to be listed in the class with which he entered college until the end of the third, or junior, year. At this time only those students who have credit for at least 14 courses with a minimum of 18 semester grades of C- or better are promoted to the senior class.
PROBATION	Students with unsatisfactory grades are placed on probation. Failure of a student to remove himself from probation after two consecutive terms or three non-consecutive terms normally results in separation from college.
EXAMINATIONS	Final examinations are regularly given at the end of each semester in all college courses. Approximately two weeks are set aside for each examination period and an attempt is made to distribute the examinations for any individual student throughout this period. Absence from a final examination, except for the most compelling reasons, usually results in a record of failure in the course. Other examinations and tests may be given at any time during the semester at the convenience of the instructors.
ATTENDANCE	Students are expected to be present on the first day of each term and to continue in attendance from day to day until the end of the term. Students are expected to be consistently regular in attendance.

Honors, Awards and Prizes

ANNUAL HONORS First honors or second honors are awarded at the end of each year to members of the freshman, sophomore and junior classes who have, in the judgment of the College Board, distinguished themselves by their scholarship during the year.

COURSE HONORS The bachelor's degree may be awarded *cum laude*, *magna cum laude* and *summa cum laude* to members of each graduating class whose records, in the judgment of the College Board, warrant this distinction.

DEPARTMENTAL HONORS A student may elect a program leading to a bachelor's degree with honors in a particular subject at the beginning of the junior year and, in some cases, at the beginning of the senior year. The opportunity is open to both A.B. degree and B.S. in B.A. degree candidates. Under this plan, the department appoints an honors adviser who assists the student in working out a unified program of courses for the junior and/or senior years. The program may include a maximum of two honors courses in which the student works with a large measure of independence under the supervision of the adviser. In the senior year, the student must satisfactorily pass a comprehensive examination given by the department.

Students may apply in writing to their major department for permission to take honors work, not later than May 1 in the sophomore year or, in some departments, in the junior year. Department approval is necessary for admission to such work. In exceptional cases and in certain departments, application may be made and admission approved by the department concerned as late as the first two weeks of the senior year but only with consent of the College Board.

Admission to an honors program does not relieve the student from any of the standing regulations. A student's candidacy for honors will be terminated at the end of any semester in which he has not maintained a standard satisfactory to the department in which he is doing honors work. If candidacy is terminated for any reason, the amount of credit to be allowed for honors courses will be determined by the College Board in consultation with the major department.

The department may recommend the student's graduation with honors, high honors or highest honors, the recommendation to occur at the conclusion of the honors program. Only students meeting the standards of the College Board for the degree *cum laude* may receive departmental recommendation for high or highest honors.

PHI BETA
KAPPA

The Society of Phi Beta Kappa, founded at the College of William and Mary in 1776, is dedicated to the recognition and encouragement of outstanding scholarly achievement in liberal studies. The Clark chapter, Lambda of Massachusetts, was established in 1953. Each year, a limited number of juniors and seniors are elected to membership on the basis of distinction in scholarship in programs which have been definitely liberal in character.

OTHER
HONORARY
SOCIETIES

Psi Chi: National Psychology Honor Society.
Gamma Theta Upsilon: National Geographical fraternity.
Delta Phi Alpha: National Honorary German fraternity.
Sigma Pi Sigma: National Physics Honor Society.

PRIZES AND
AWARDS

Homer Payson Little Award in Geology: Provided by a group of interested alumni, the award is presented each Spring to that student who has achieved the highest record in geology classes during the year. The award is named in honor of Dr. Little, a professor of geology at Clark from 1922 until 1954 and also Dean of Clark College.

Prentiss Cheney Hoyt Poetry Prize: A prize of \$20 is awarded annually by the English Department for the best poem by an undergraduate. The prize money is received from a fund established by alumni as a memorial to Dr. Hoyt, a professor of English at Clark from 1909 to 1920.

Loring Holmes Dodd Drama Contest: A prize of \$35 is awarded by the English Department to the student writing the best one-act play. Dr. Dodd was professor of English at Clark from 1910 to 1949 and was chairman of that department.

Physics Achievement Award: Each year, the student in Physics 11 who, in the opinion of the instructor, shows the best performance and improvement in the course work is given a copy of the

Handbook of Chemistry and Physics, made available by the Chemical Rubber Publishing Company.

Ahepa Greek Prize: A prize of \$25 is awarded each year to the best student in Elementary Greek. The prize is made available by the Worcester chapter, Order of Ahepa.

Tuition and Other Charges

GENERAL INFORMATION

Tuition, fees and other charges are listed below. Certain special fees may be required of students in certain departments. Charges for the Evening College and the Summer School can be found in their respective catalogs.

Tuition, board, dormitory rent and certain fees are due and payable ten days prior to the opening of each semester. No one is permitted to register for any semester until financial obligations have been satisfactorily arranged. Veterans relying on government aid should have enough resources to meet the initial payments because the first government checks are often delayed. A penalty fee is levied for late registration or for late payment of charges.

TUITION

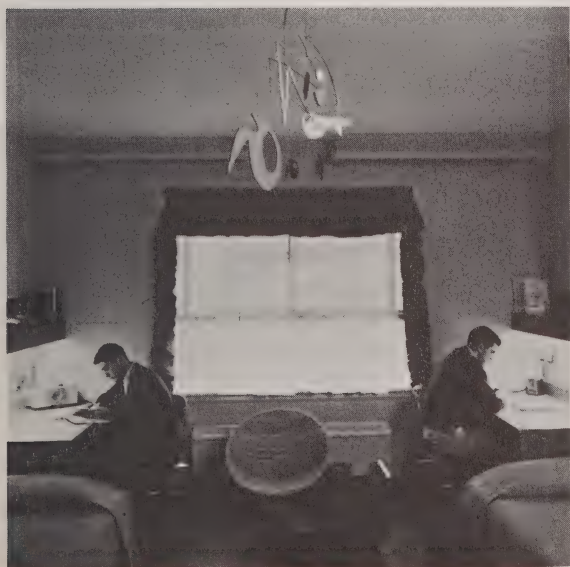
Tuition is based on a normal program of five courses. Students who enroll for more or less than the normal program pay on a "per course" basis, one-fifth the full tuition.

Refund: If a student withdraws during the first week of any semester, he is allowed a refund of 80 per cent on tuition; second week—60 per cent; third week—40 per cent; fourth week—20 per cent; and after the fourth week—no refund.



BOARD	All undergraduates not living at home are required to eat at the Dining Hall.
COLLEGE DEPOSIT	All undergraduates are required to pay a deposit to cover minor charges which may be incurred during the academic year. The deposit minus the incurred charges is returnable.
DORMITORY DEPOSIT	The dormitory deposit is required of upperclassmen to reserve a place in the dormitory. It will be credited toward the dormitory charges. The deposit is forfeited if the student does not enroll for the specified semester.
DORMITORY RESIDENCE	Undergraduates not living at home or in a fraternity house must live in the dormitories.
STUDENT ACTIVITY FEE	The fee is required of all undergraduates including part-time but not special students.
INSURANCE	All students are expected to subscribe to the student insurance plan which gives year-round coverage for health and accidents.
APPLICATION FEE	This fee must accompany the application for admission to the undergraduate colleges. It is not returnable.
ADMISSION DEPOSIT	A fee is required of students when they accept the formal offer of admission. It will be credited toward charges for the first semester. The deposit is forfeited if the student does not enroll for the specified semester.
KEY DEPOSITS	Fees may be required of the student by certain departments for entrance to buildings, laboratories, personal lockers or mail boxes.

TUITION	Full program	\$650.00 per semester
	Per course	\$130.00 per semester
BOARD		\$240.00 per semester
DORMITORY CHARGES	Room rent (single)	\$200.00 per semester
	Room rent (double)	\$150.00 per semester
ACTIVITY FEE		\$ 12.50 per semester
LABORATORY FEES	Physics, Biology, Geology, Psychology, Languages, and Chemistry 11	\$ 15.00 per semester
	All other Chemistry courses	\$ 20.00 per semester
OTHER FEES	Application	\$ 10.00
	Matriculation	\$ 5.00
	Induction (Freshmen)	\$ 35.00
	Induction (Transfers)	\$ 10.00
	Diploma (Seniors)	\$ 5.00
	Insurance	\$ 25.00
	Late registration	\$ 5.00
	Late payment	\$ 5.00
	Transcripts (no charge for first two)	\$ 1.00 each
GRADUATE SCHOOL FEES	Diploma (master's degree)	\$ 5.00
	Publications (master's degree)	\$ 10.00
	Diploma (doctor's degree)	\$ 25.00
	Publications (doctor's degree)	\$ 30.00
DEPOSITS	Admissions	\$ 50.00
	Dormitory	\$ 50.00
	College	\$ 25.00



Student Financial Aid

GENERAL INFORMATION

Scholarships and loans are provided by the University from endowed and unendowed funds. A limited amount of part-time employment is available in various offices and departments of the University. Other scholarships and loans are available from varying sources in communities throughout the United States.

SCHOLARSHIPS

Scholarships are awarded on the basis of ability, financial need and character. They vary in amount and some are restricted to definite localities or to particular subjects.

To be eligible for a scholarship, an entering freshman should have a scholastic record which places him in the upper third of his secondary school class. Upperclassmen with satisfactory academic records may apply for scholarships at the beginning of any semester. Transfer students must be in residence at least one semester to be considered for scholarships.

Ordinarily an award for the first semester is continued through the second semester if the holder maintains a satisfactory scholastic record.

Incoming freshmen applying for scholarship aid do so through the College Scholarship Service, Box 176, Princeton, N. J. or, for the Far West, Box 27896, Los Angeles 27, Cal. The service provides the University with an independent analysis of the applicant's financial needs. Application forms may be obtained at the student's secondary school or from the College Financial Aid Officer of the University. Upperclassmen may apply for scholarships through the College Financial Aid Officer of the University.

LOANS

Students who find it necessary to borrow money to continue their education may do so through various sources. Clark maintains its own loan funds which are of the short-term variety with interest bearing immediately upon receipt of the loan.

The National Defense Act Student Loan Program provides funds for long-term loans which bear no interest until a student has completed full-time study. Normally a person borrowing from these funds will repay the amount over a ten-year period. Graduates who enter public school teaching at the elementary or secondary level are eligible to have up to 50 per cent of their loan

excused if they remain in teaching for a five-year period.

Other loan sources are also available and should be considered carefully by the applicant. In most cases, information about these loans is available through an applicant's secondary school.

Applications for Clark University loans or for National Defense Loans are available from the Financial Aid Office of the University.

SCHOLARSHIP
FUNDS

The following scholarships are currently available from University funds:

The Ellis-Hubley Competitive Scholarships: These are competitive scholarships restricted to male residents of Worcester or neighboring towns who have graduated from secondary schools in those areas. The scholarship accords full tuition plus a stipend and is awarded annually to the beneficiary from the income of funds bequeathed in memory of Gordon A. Hubley, Clark '10, and of Theodore T. and Gary G. Ellis.

One appointment is made each year to a member of the freshman class and the award is normally continued throughout the four years of the college course. Up to five other full tuition scholarships are awarded annually to applicants who, in the judgment of the Scholarship Committee, stand next below the successful applicant. A candidate must receive the recommendation of the principal or headmaster of his secondary school.

The Charles T. Bumer Memorial Scholarships: Up to six full tuition scholarships, one of which includes an additional stipend, are awarded annually to entering freshmen who reside outside of Worcester County. These scholarships are granted to outstanding freshman applicants and are named in honor of the late Dr. Bumer, a professor of mathematics at Clark from 1948 to 1960 and chairman of that department.

The Jonas G. Clark Scholarships: These scholarships have been established by the trustees to provide financial aid for undergraduate students.

The Theodore T. and Mary G. Ellis Scholarships: These scholarships provide financial aid for male or female residents of Worcester and Worcester County.

The Whitman Scholarship: Named in honor of Ernest R. Whitman, long-time athletic director at Clark, this scholarship offers

full tuition plus a yearly stipend and is awarded to students, usually men, whose qualities of leadership in classroom and campus merit such an award.

The Albert C. Erickson Scholarship: Established by the Tupper Foundation to honor an outstanding Clark student and teacher whose death in 1936 terminated a brilliant career in mathematical physics, this \$1,000 tuition scholarship is awarded annually to an undergraduate, normally near the end of his junior year, who has done outstanding work in physics and mathematics and who shows unusual promise in these fields.

The Sanford Memorial Scholarship: Established by alumni in honor of Edmund C. Sanford, president of Clark College from 1909 to 1920, the fund provides an annual scholarship for a male senior undergraduate.

The Livermore and Ambulance Scholarship: The endowment for this scholarship was provided by citizens of Worcester in honor of Charles Randall Livermore, first Clark man to fall in battle in World War I, and of his companions in the Clark Unit of Ambulance Drivers. The scholarship is for male students who are residents of Worcester County.

The Henry A. Willis Scholarships: Male students from Fitchburg, Mass., and vicinity have first consideration in the award of these scholarships. In the absence of suitable candidates from this community, grants may be made to others.

The Helen Brewster Randolph Memorial Scholarship: Established by the late Professor Charles B. Randolph in memory of his mother, the fund provides scholarships restricted to male college students.

The Charles B. Randolph Fund: The fund is restricted to male students, preferably those whose major is a foreign language.

The Alice Friend Newton Memorial Scholarship: This scholarship provides full tuition for an upperclass student in the Women's College whose major is psychology.

The William Richardson Scholarship: This scholarship was established by a bequest of Carlton E. Richardson, Clark '08, as a memorial to his father. The income of this fund is available preferably for male students of the Protestant faith.

The Jennie L. Richardson Scholarship: This scholarship was

established by a bequest of Carlton E. Richardson, Clark '08, as a memorial to his mother. The income of this fund is available for female students of the Protestant faith.

The B'nai B'rith Scholarship: The Worcester Chapter, Order of B'nai B'rith, provides a scholarship primarily but not exclusively for the aid of Jewish students.

The Clark University Faculty Women's Club Scholarships: These scholarships are available to undergraduate students, either men or women, who rank high in intellectual and personal qualities.

The Aaron Fuchs Memorial Scholarship Fund: Given by Mrs. Celia Fuchs in memory of her husband and in honor of her sons, Lawrence, Clark '44, and Jerome, Clark '53, provides scholarship aid for non-residents of Worcester or Worcester County.

The Reginald Bryant Allen Fund: The income from this fund is to be awarded annually to a deserving student majoring in mathematics.

The Alumni Group Scholarship: One full tuition scholarship to an accredited freshman is awarded from a fund established by the trustees and the first three classes to graduate from Clark College, '05, '06 and '07.

The Charles W. and Annie L. Bruninghaus Fund: The income from this fund, established in 1957, provides scholarship aid to undergraduates.

The Levi Knowlton Fund: A bequest of Mary H. Nixon in honor of her father, Levi Knowlton, to provide scholarship aid to undergraduates.

The Abraham Persky Scholarship Fund: The income of this fund is used to assist deserving undergraduates.

Pleiades Scholarship: This scholarship is awarded annually to a member of the Women's College on the basis of active citizenship, scholarship and financial need from funds raised by Pleiades, senior women's honorary society.

The Probus Club Scholarship: This scholarship is supported by the Probus Club of Worcester.

The National Council of Jewish Women Scholarship: The Worcester section, National Council of Jewish Women, awards a scholarship each year to a Jewish student of the Women's College who resides in Worcester County.

The High School Basketball Tournament Scholarship: Receipts of the High School Basketball Tournament held annually at Clark provide assistance to male undergraduates.

The Art Museum Scholarship: This scholarship is available to Worcester Art Museum students to pursue studies at Clark.

LOAN FUNDS

The following loan funds are currently available to undergraduates:

The Alumni Loan Fund: Established by the trustees and alumni for undergraduate assistance.

The May S. Rogers Loan Fund: The fund is available to undergraduates who need loan assistance.

The Haskell Talamo Loan Fund: The fund has been established by relatives and friends of the late Dr. Haskell Talamo, Clark '16.

The Louis N. Wilson Fund: The fund was established by the first librarian of Clark, as a loan source for male students in the college.

National Defense Student Loans: These loans are available to undergraduate students, especially those with superior records who desire to teach in elementary or secondary schools or who have special aptitude in science, mathematics or a modern foreign language.

Student Services

DINING HALL

The University Dining Hall is operated for the convenience of the students and staff of the University. Service is cafeteria style. Undergraduates who do not live at home are required to eat at the Dining Hall. Other members of the University are welcome on a permanent basis or for single meals.



DORMITORIES	<p>Men not living in their own homes are required to live in the men's dormitory or in a fraternity house. Rooms are reserved on receipt of the dormitory deposit fee. The deposit is later applied to room rental charges.</p> <p>Women not living in their own homes are required to live in the women's dormitory. Other arrangements are permitted only on written request from a parent or guardian and the consent of the Dean of Women.</p> <p>Room reservations and deposit procedures are the same for women's and men's dormitories.</p>
INFIRMARY	<p>Facilities are provided at the University Infirmary for the treatment of emergencies and for minor medical services to all students while they are on campus. In addition, there is provision for the temporary hospitalization of resident students in cases of more serious illness. A nurse and University physicians are in attendance. The infirmary is open throughout the academic year.</p>
HEALTH AND ACCIDENT INSURANCE	<p>A student has the opportunity of subscribing to a low-cost health and accident insurance which will cover medical contingencies other than those available at the infirmary.</p>
PSYCHOLOGICAL CLINIC	<p>A psychological clinic is available on campus to provide testing and counseling services to students who wish help in academic or personal adjustment. If desired, other more appropriate University or community resources can be recommended to the student. The staff includes clinic director, Dr. Robert W. Baker, other clinical psychologists in the Department of Psychology and consultants in psychiatry, psychiatric social work and clinical psychology.</p>
GUIDANCE AND PLACEMENT BUREAU	<p>Individual counseling on problems of vocational planning and adjustment to college life is also available through the Guidance and Placement Bureau. The service supplements the advisory services of individual teachers and deans. The bureau assists the student in job exploration, informing him of available positions and arranging interviews with potential employers. Students are urged to establish a permanent reference file. Part-time employment opportunities are also listed with the bureau for students who wish to work during their college career to help meet college expenses. The bureau is directed by Dr. James M. Coffee, associate professor of education.</p>



Student Life

STUDENT LIFE

Student life at Clark is, as expected at a small institution, friendly and informal. Students are expected to conform to recognized standards of morality, good order and consideration for others. College activities are under a minimum degree of faculty supervision. Though all activities are not listed below, some deserve description.

STUDENT ACTIVITIES AND FEE

Non-athletic activities are partially supported by the student activities fee which, in addition, admits students to all athletic contests on campus, provides them with the college newspaper and yearbook and admits them to certain lectures, plays and concerts.

LECTURES AND CONCERTS

Throughout the year, lectures and concerts are held on campus bringing outstanding scholars, musicians and artists to the campus. The Clark Fine Arts Course and the Clark Faculty Lectures in the Humanities are the two major sources of such cultural activity. In addition, the student assemblies also bring outstanding lecturers to the campus. In recent years, these programs have included the Budapest String Quartet, Canadian Players, Robert Gorham Davis, Henri Peyre, Turnau Opera Players and the National Ballet of Finland.



MUSIC

Musical organizations open to all students include the University Chorale, Concert Choir, Madrigal Singers, "Hit'n Mist'ers" and the Chamber Players.

DRAMATICS

The Clark University Players Society each year presents dramatic offerings with student casts. It has a distinguished record of productions which, in recent years, has included *Medea*, *Our Town*, *Twelfth Night* and *Hedda Gabler*.

SPEECH AND DEBATE

The Debate Council annually directs a High School Debate Clinic as well as entering numerous debate contests.

SOCIAL SCIENCE FORUM

In recent years, this group has brought to campus such persons as Norman Thomas, Rev. Willard Uphaus and Thurgood Marshall, offering an opportunity for students to hear and question controversial views.

PUBLICATIONS

Students may join the staffs of *Scarlet*, weekly student newspaper; *Helicon*, student literary magazine; *Fotch*, student humor magazine; *Pasticcio*, student yearbook; or *Social Science Forum* or *Mainstream*, journals of student opinion.

OTHER ORGANIZATIONS

Other campus organizations are affiliated with areas of department instruction, such as the Physics, Psychology and German clubs; hobbies or interests, such as the Chess Club, Pre-Law Club

or Society for the Advancement of Management; and other activities, such as the Outing Club.

FRATERNITIES

Four fraternities are currently associated with the University. They are Lambda Chi Alpha, Tau Epsilon Phi, Kappa Phi and Phi Sigma Delta. All own fraternity houses nearby campus where members live.

GRYPHON AND PLEIADES

Each year, a group of men and women are chosen from the junior class on the basis of outstanding characteristics to join Gryphon—senior men's honorary society, or Pleiades—senior women's honorary society. The societies play an important role in campus life and in maintaining the traditions of the College. They supervise such annual events as *Rope Pull*, *Spree Day* and the *Christmas Tea*. In addition, they sponsor annual lectures.

SCARLET KEY

In addition to acting as guides for campus visitors, *Scarlet Key*, a sophomore-junior service organization, undertakes other activities beneficial to the University.

Physical Education and Athletics

PHYSICAL EDUCATION

Physical Education is required of all students for the general promotion of their health and mental efficiency. Two years of physical education, two hours per week, is a prerequisite for graduation. Students are excused from this requirement only on the recommendation of the medical director.



The physical education program for women requires, during each of the two years, attendance at classes in body mechanics and one of the rhythmic activities. Participation in one group sport and in one individual sport is also required. Folk dancing, square dancing and modern dancing are offered.

ATHLETICS

Students in the Men's College have the opportunity to participate in intercollegiate soccer, baseball, tennis, basketball, golf and crew. Competent coaches have immediate supervision over the teams.

Students in the Women's College can participate in hockey, crew, archery, tennis, basketball, volley ball, badminton, fencing, softball and golf. Tournaments are held in the spring and fall and trophies are awarded to winners. Women use their own gymnasium for practice but have the use of the Alumni Gymnasium for games with outside organizations.

ELIGIBILITY

Participation in organized extracurricular competitive activities is denied only when a student's scholastic record indicates that continuance in an activity might be responsible for scholastic failure. Students carrying less than a full program of studies are ineligible unless the reduced program permits graduation at the end of the year in which the program is carried. A student transferring with advanced standing from another four-year college is ineligible for one calendar year from the date of registration at Clark to participate in any varsity sport in which he participated at the previous institution. Special students are not normally entitled to participate in competitive intercollegiate sports.





*"The very best kind of education is obtained in
doing things ones self under competent direction
and with good guidance."*

— CHARLES W. ELIOT

SCHOOL OF
GEOGRAPHY
ROOM



THE GRADUATE SCHOOL

The Graduate School

GENERAL INFORMATION

Clark University was initially established as one of America's first institutions dedicated exclusively to graduate study and research. Its faculty and graduates have endowed the University with an impressive record of accomplishments through the years. Under the administration of the Graduate Board, Clark offers programs leading to master's and doctor's degrees to qualified holders of a bachelor's degree or its equivalent of attainment.

Master of Arts degrees are offered in the fields of biology, chemistry, economics, education, geography, government, history, international relations, mathematics, physics, psychology and sociology.

Doctor of Philosophy degrees are offered in biology, chemistry, chemical physics, economics, geography, history, international relations, and psychology. A Doctor of Education degree is offered by the Department of Education.

Departments which do not at present accept candidates for graduate degrees may offer courses which are suitable for inclusion in a program of graduate study.

Scholarships and fellowships afford financial aid to candidates for the graduate degrees and are listed at the end of this section. Additional information concerning departments and their offerings will be found in the section entitled "Departments and Courses."

INQUIRIES

General inquiries and correspondence concerning the Graduate School should be directed to the Dean of the Graduate School. Inquiries concerning specific programs of graduate work and applications for admission should be addressed to the chairman of the department concerned.

ADMISSION TO THE GRADUATE SCHOOL

Admission to the Graduate School may be granted only by the Graduate Board on the recommendation of a department of the University. Admission to the school does not imply admission to candidacy for a degree.

Application: A prospective applicant should communicate with the department in which he expects to do his major work. If he is encouraged by the department to make application, he will be provided with application blanks. These should be returned to

the chairman of the department with an official transcript of undergraduate work and letters of recommendation from at least two persons who are competent to judge the applicant's qualifications.

In addition, applicants for admission to the Graduate School are strongly urged, and may be required, to submit a record of attainment in the Graduate Record Examination given by the Educational Testing Service, Princeton, N. J.

Application for both admission and for financial aid should be completed not later than March 1 if the applicant intends to begin his studies in the following September. Applications may be submitted, however, throughout the year and periodically are considered by the Graduate Board.

Admission: Admission to the Graduate School is granted for entry only at a specified time and lapses if the student fails to enter at that time. Admission as special or part-time graduate students may be granted to qualified applicants who do not wish to work for a degree or who cannot devote full time to study.

MASTER
OF ARTS

Residence: An academic year of full-time study in residence, or its strict equivalent in summer sessions and part-time study, is a minimum requirement for a master's degree. Residence study is broadly defined as graduate work done at Clark University under the immediate personal supervision of at least one member of the university faculty.

Foreign Language: A reading knowledge of a foreign language, usually French or German, may be required of candidates for the degree of master of arts at the discretion of the major department.

Candidacy: Application for admission to candidacy for a master's degree should be filed with the Dean of the Graduate School not later than the first week of the last full semester which the student expects to spend in residence as a candidate for this degree.

Applications will be considered by the Graduate Board when the student has completed one semester of full-time graduate work or its equivalent in residence at the University, obtained the written endorsement of his major department and paid the diploma fee and publication fee.



Candidacy for the degree of Master of Arts is good through the fourth commencement after admission to candidacy. For satisfactory reasons, candidacy may be extended once for an additional period of three years by vote of the Graduate Board. If the candidacy expires without the degree having been awarded, the diploma and publication fees, less any expenses incurred, are returned.

Course Requirements: Each student must meet a minimum course requirement of five courses, or their equivalent in half-courses. The program must be approved by the major department. One of the courses may be a research course devoted to the preparation of the thesis.

Thesis: The thesis will be written on a topic in the field of the student's special interest under the supervision of a member of his major department. A copy of the thesis, a précis of it approved by the supervising instructor, and an academic history page must be deposited in the Registrar's office not later than three weeks before the date of the commencement at which the degree is to be conferred. A second copy of the thesis with a copy of the précis must be delivered to the major department. The précis may not exceed 75 words in length. The title page, précis and academic history forms are obtainable from the Registrar. The ribbon copy of the thesis must be typed on prescribed

paper, marginally ruled in black and obtainable at the University Bookstore.

The thesis is deposited by the Registrar in the University Library. The *précis* is printed by the University in an annual publication, *Dissertations and Theses*.

Each candidate must make a satisfactory record in such written examinations as may be required by the major department and in a final oral examination by a committee of three or more, two of whom must be members of the Graduate Board.

MASTER OF
ARTS IN
EDUCATION

The residency, candidacy, course and examination requirements are basically the same as those listed for the degree of Master of Arts.

Thesis: Students may choose one of three options, subject to the approval of the Department of Education. They may choose to (1) prepare a thesis or special report, as required for the M.A. degree; or (2) elect two additional semester courses in subject-matter fields; or (3) elect a double seminar in which papers are prepared and presented to fellow students and staff.

Further information concerning the degree of Master of Arts in Education may be found in the section, "Departments and Courses," listed under the Department of Education.

DOCTOR OF
EDUCATION

The University, beginning in 1962, offers a program leading to the degree of Doctor of Education. The requirements for this degree closely parallel those for the degree of Doctor of Philosophy. Applicants for admission to the program are expected to satisfy all requirements for the Doctor of Philosophy degree.

DOCTOR OF
PHILOSOPHY

Only such candidates as give evidence of general proficiency, power of investigation and high attainments in the special fields in which their major subjects lie will be encouraged to proceed to the degree of Doctor of Philosophy.

Residence: The minimum requirement is one year of full-time study, or its equivalent in part-time work, in residence which is broadly defined as graduate work done at Clark University under the immediate personal supervision of at least one member of the University faculty. If the degree of Master of Arts has been earned at Clark, this requirement is an addition to the residence requirement for that degree. For the degree of Doctor

of Philosophy, four courses, or the equivalent in half-courses, is a normal full-time program.

Foreign Language: A prospective candidate is advised to prepare himself early for the examinations in the reading of modern foreign languages. Usually the student must pass two language examinations. French and German are normally required but the Graduate Board may authorize the substitution of another language for one of these and a student's major department may require additional languages.

A department, under special circumstances and with the approval of the Graduate Board, may permit a student to substitute for the usual language requirements: (1) the passing of an examination in either French or German and, in addition, certification by the department that the candidate has demonstrated a working knowledge of the language in the departmental program; and (2) the satisfactory completion of an additional program of studies in a field related to the major program.

The language examinations are conducted by a committee composed of representatives of the modern language departments and a representative of the student's major department. The results of the language examination are reported to the Registrar by the language committee; the results of substitute requirements are reported by the department. A student must fulfill the above requirements before he will be permitted to take the preliminary examination for the degree of Doctor of Philosophy.

Foreign students whose native tongue is not English may petition the Graduate Board, subject to the approval of the department concerned, to omit either French or German if both languages are not necessary for the field of concentration.

Candidacy: Applications for admission to candidacy must be filed with the Dean of the Graduate School no later than November 1st in any academic year by students who hope to receive the degree at the end of that academic year.

An application for admission to candidacy will be considered by the Graduate Board when the applicant has (1) completed two full academic years of graduate work, or its equivalent in part-time work, including one year at Clark University; (2) passed the required examinations in foreign languages, or com-

pleted satisfactorily a substitute program; (3) passed a preliminary examination in his chosen fields of study; (4) obtained the written endorsement of his major department; and (5) paid the diploma fee and publication fee.

Candidacy for the degree of Doctor of Philosophy is good through the fourth commencement after admission to candidacy. For satisfactory reasons, candidacy may be extended once for an additional period of three years by vote of the Graduate Board. If candidacy expires without the degree having been awarded, the diploma fee and publication fee, less any expenses incurred, are returned.

Dissertation: A dissertation which is expected to make an original contribution to some special field of knowledge is required of each candidate. The dissertation, approved by the chief instructor, is laid before the examining committee at the final oral examination.

An abstract of the dissertation, not exceeding 600 words in length, and a précis, not exceeding 75 words, both approved by the instructor under whom they were written, are also required.

Not later than four weeks before the commencement at which the degree is to be conferred, the first, or ribbon, copy of the



dissertation, together with two official title pages, an academic history page, the first copy of the abstract and of the précis, each in a form prescribed, must be delivered to the Registrar. At the same time, a second copy of the dissertation and of the abstract may be required by the major department. The title page, précis and academic history forms are obtainable from the Registrar. The ribbon copy of the dissertation must be typed on prescribed paper, marginally ruled in black, obtainable at the University Bookstore.

The Registrar deposits the dissertation and the abstract in the University Library where they remain permanently. A microfilm copy of each dissertation is made by University Microfilms, Inc., of Ann Arbor, Mich., and is available for duplication by them on request. The abstract is printed in *Dissertation Abstracts*; the précis is printed by the University in an annual publication, *Dissertations and Theses*.

Final Examination: The final examination is oral and lasts for at least two hours. Additional written examinations may be given if the major department so directs. The candidate is expected to defend his dissertation and, at the discretion of the examining committee, may be questioned on the entire special field of his study. The oral examination is conducted by a committee of at least four members, including the chairman and one other member of the major department, a member of the Graduate Board under whom the candidate has done no work, unless such a member has participated in the preliminary examination of the candidate, and such other examiners as may be duly appointed. The president of the University is authorized to invite any person from within or without the University to be present and to assist in the examination.

GRADUATE
SCHOLARSHIPS,
FELLOWSHIPS
AND
ASSISTANTSHIPS

Graduate fellowships and scholarships are provided for well-qualified, full-time graduate students by the University from endowed funds and from other sources. Financial aid to graduate students is available also in the form of grants from a number of special funds, and in some departments, from sponsored research grants. A limited amount of part-time employment is available in the various offices and departments of the University. Frequently, as in the case of departmental assistants, this employment yields useful experience.

Application: Application for a scholarship or fellowship to begin in September should be made before March 1 to the chairman of the department in which the applicant expects to do his major work. Late applications are acted upon periodically. All applications, after endorsement by the department, go to the Graduate Board for final action.

According to an agreement between the members of the Association of American Universities, elections of fellows and scholars will be communicated in April, but not before, to each successful candidate.

Research Fellowships: These fellowships may be awarded to graduate students who have fulfilled their residence requirements and who are pursuing a full-time doctoral program.

Teaching Assistant Scholarships or Fellowships: These may be awarded to teaching assistants who are engaged in full-time activity on campus, of which approximately half-time is devoted to teaching duties and approximately half-time, up to a maximum of three courses, is devoted to graduate study.

Teaching Assistantships: In several departments, teaching assistantships, involving less than half-time, are available with stipends which vary accordingly to the amount of service agreed upon.

Assistantships: In several departments, assistantships are available. They involve a variety of services with stipends to correspond, and usually provide the student with experience which will be useful in his later professional work.

Graduate Fellowship and Scholarship Funds: Stipends for graduate fellowships and scholarships are provided by:

THE GEORGE FRISBIE HOAR FUND, the gift of Andrew Carnegie in honor of the second president of the University's Board of Trustees;

THE AUSTIN S. GARVER FUND, a bequest from Austin S. Garver, member of the Board of Trustees from 1908 to 1918;

THE CHARLES H. THURBER FUND, provided by Charles H. Thurber, member of the Board of Trustees from 1913 to 1938 and president of the board from 1919 to 1937;

THE GEORGE S. BARTON FUND, a bequest from the Hon. George S. Barton of Worcester, to be used for the benefit of native-born citizens of Worcester;

THE ALUMNI ASSOCIATION FUND, provided by alumni who hold the degree of Doctor of Philosophy to benefit students studying for that degree;

and THE JOSEPH F. DONNELLY MEMORIAL FUND, a bequest from Lucretia F. Donnelly to help men who are enrolled in a course leading to the degree of Doctor of Philosophy.

GRADUATE
AID

THE JOHN WHITE FIELD FUND, established by Mrs. Eliza W. Field to provide for the minor needs of a scholar or fellow;

THE ELIZA D. DODGE FUND, to be granted to graduate students of limited means who are engaged in research work;

THE MYERS FUND, a gift of George E. Myers, Ph.D., '06, to assist graduate students to do research in education and psychology.

GRADUATE
LOANS

Loans, bearing interest at three percent per year, are available for graduate students from these funds:

THE MARY S. ROGERS SCHOLARSHIP AND LOAN FUND, established in 1926 for the benefit of students in the graduate school;

and THE SARAH M. THURBER LOAN FUND, established by the late Dr. Charles H. Thurber, former president of the University Board of Trustees, as a memorial to his mother.

NATIONAL
DEFENSE
STUDENT
LOANS

These loans are available to graduate students, especially those with superior records who desire to teach in elementary or secondary schools or who have special aptitude in science, mathematics or a modern foreign language. Applications for these loans should be made at the Bursar's office.



THE SUMMER SCHOOL



The Summer School

SUMMER STUDY Intensive instruction in numerous fields of study is offered through two summer programs: a six-week summer session and a three-week intersession program. A variety of courses is offered for undergraduates, graduate students and teachers. A student may take three semester courses (9 semester hours of credit) by attending the Intersession and the Summer Session. Evening courses are also available during the summer to all students to continue their education while engaged in day-time employment. The student is encouraged to attend informal afternoon seminars, conferences and week-end excursions to New England cultural centers.

**DEGREES AND
CREDIT**

All courses offered in the Summer Session or Intersession programs are accepted at Clark for credit toward bachelor's degrees unless they are specifically limited in the description of the course. Many courses count toward the degrees of Master of Arts, Master of Arts in Education and Doctor of Philosophy. However, approval for such courses should be obtained in advance from the student's major department.



The degree of Master of Arts may be obtained in certain fields by completing successfully a full-time program for five summers. Students interested in such a program should discuss their plans with the chairman of the department concerned.

Graduate students formally registered in the Summer School may, with the approval of their major department, enroll in thesis courses under the direction of regular members of the staff.

Each single course offered in the Summer School is equivalent to a half-year course of the Clark academic year and yields three semester hours of credit. The double courses in languages and occasionally other subjects, which meet for two lecture periods a day for six and one-half weeks, are equivalent to year-courses or six semester hours.

A student may carry in a normal program one course in the Intersession and two courses in the Summer Session. Permission to carry an additional course may be granted but only in exceptional cases and with approval in writing prior to registration.

SUMMER
SCHOOL
CATALOG

Detailed information concerning the Summer Session and Intersession are contained in a Summer School catalog which may be received upon request from the director of the Summer School.

EVENING COLLEGE



The Evening College

GENERAL INFORMATION

The Evening College, established in 1953 as an institution devoted to adult learning, has three primary functions. With the conviction that education in our modern society must be a life-long process, it provides university education for adults of all ages who seek further knowledge and personal development through selected studies in the broad areas of the liberal arts. Further, in recognition of the rapidly developing and changing needs of business and the professions, it provides courses designed to help working men and women improve their occupational skills and to prepare for positions of increased responsibility.

Secondly, the Evening College provides an opportunity for adults to earn the bachelor's degree, exclusively by evening study, through programs planned to meet the unique educational needs of the mature person. Formal programs are available leading to the degree of Bachelor of Science in either general studies or business administration. The Evening College also offers the Diploma in General Studies after completion of a short formal program in liberal education designed specifically for adults. The Evening College also offers the degree of Master of Business Administration.

Finally, as a community service, the Evening College organizes frequent non-credit short courses, institutes and seminars, which are tailored to the specific needs of various civic, professional and business groups.

ADMISSION

Students may be enrolled for either individual courses or formal programs of study.

Individual Courses: Admission to individual courses in the Evening College is open to all interested adults seeking to further their education. High school graduation is not required but



desirable. Continued attendance is contingent upon evidence of ability to profit from the instruction offered. Advanced courses for which prerequisite courses or experience are indicated are open only to persons who meet the stated requirements.

Admission To Formal Programs: Adults applying for a formal program of study in the Evening College will be required to submit records of their previous schooling prior to admission. Except under unusual circumstances applicants must possess a diploma from an accredited high school. Applicants for the Bachelor of Science degree or the Diploma in General Studies who have not attended college previously may arrange to have their high school records forwarded to the Evening College on forms supplied to them on request to the college. Adults who have attended other colleges should request that their transcripts be forwarded directly to the Evening College.

MASTER OF
BUSINESS
ADMINISTRATION

The Evening College offers a graduate program leading to the degree of Master of Business Administration. Established in 1962, the program is designed to provide the best possible education for men and women at the graduate level for careers in business. Through carefully selected substantive materials and an analytical approach to the practice of management, the program is designed to enable college graduates to supplement job experience in preparing for positions of executive responsibility. The course of study emphasizes administrative decision-making rather than details of initial positions in business. Qualified students may take advantage of the program while remaining in their present business activities and continuing to gain experience through evening programs of study. In offering the program, the Evening College seeks to broaden its services to the local community and to provide university education for adults at an additional level of formal study.

The curriculum consists of 30 semester hours of credit. Details of the curriculum, tuition and admissions requirements will be found in the Evening College Catalog.

EVENING
COLLEGE
CATALOG

Detailed information about the Evening College is contained in a special catalog available on request from the director of the Evening College. Catalogs are issued in advance of registration for the Fall and Spring semesters.



DEPARTMENTS AND COURSES

Departments and Courses

CONTENTS	Listed on the following pages are department faculties, undergraduate and graduate programs and course offerings. The departments are listed in alphabetical order.
DEPARTMENT FACULTIES	The staff of each department is listed by rank and by alphabetical order within rank. Department chairmen are listed first. For further information concerning the faculty, see the general faculty listing.
DEPARTMENT PROGRAMS	Each department offers information concerning its undergraduate offerings and requirements as well as the offerings and requirements concerning graduate study, if a graduate program is offered. For further information concerning a major field of study, students should consult their faculty advisers or major department chairmen.
DEPARTMENT COURSES	The course offerings of each department are listed in their numerical sequence. The announced courses are subject to any modification which may become necessary.
COURSE NUMBERING SYSTEM	<p>Each course is indicated by number and title. A course number, unmodified by "a" or "b" indicates a year-course, one which continues through two semesters of an academic year. A course number followed by an "a" refers to a half-course usually offered in the first semester. A number followed by a "b" refers to a half-course usually offered in the second semester.</p> <p>Two-semester courses are divisible unless an explicit statement of indivisibility appears in the course statement. Courses which are indivisible require the successful completion of the first semester as a prerequisite to entering the second semester.</p>
COURSE SEQUENCE	<p>Courses are arranged, in general, in sequence progressing from elementary to advanced courses.</p> <p>Courses which are <i>primarily for undergraduates</i> are designated by numbers beginning with the numeral 1.</p> <p>Courses for <i>advanced undergraduates and graduate students</i> are designated by numbers beginning with the numeral 2.</p> <p>Courses which are <i>primarily for graduate students</i> are designated by numbers beginning with the numeral 3.</p>

ORDER OF	The listing on the following pages is as follows:	
DEPARTMENTS	American Civilization	Geology
AND	Biology	German
OFFERINGS	Business Administration	History, Government and
	Chemistry	International Relations
	Classics	Interdepartmental Majors
	Comparative Literature	Linguistics
	Economics and Sociology	Mathematics
	Education	Music
	English	Philosophy
	Fine Arts	Physics
	Freshman Orientation	Psychology
	Geography	Romance Languages

American Civilization

An interdepartmental major in the field of American Civilization is offered to candidates for the degree of Bachelor of Arts. The program is outlined under the listing for Interdepartmental Majors.

Biology

DEPARTMENT FACULTY

Rudolph F. Nunnemacher, Ph.D., *Professor of Zoology,
Department Chairman*
George Camougis, Ph.D., *Associate Professor of Physiology*
John T. Reynolds, Ph.D., *Associate Professor of Microbiology*
Harris Rosenkrantz, Ph.D., *Associate Professor (affiliate) of Biology*
Aldo P. Truant, Ph.D., *Associate Professor (affiliate) of Biology*
Vernon Ahmadjian, Ph.D., *Assistant Professor of Botany*
Burton N. Gates, Ph.D., *Research Associate in Botany*

UNDERGRADUATE PROGRAM

Biology 11 presents a comprehensive view which is prerequisite to all other courses in the department. A departmental major must take Biology 11, three advanced courses in biology, Chemistry 11, Physics 11, Mathematics 11 and at least one additional course in chemistry, physics or geology. Mathematics 11 does not count toward the fulfillment of the major requirements.

GRADUATE PROGRAM

The department offers courses leading to Master of Arts and Doctor of Philosophy degrees in specialized phases of botany, zoology, physiology and bacteriology. Admission to the graduate program assumes adequate preparation in the basic sciences, an overall undergraduate record of B or better, and satisfactory standing in the Graduate Record Examination. Tuition scholarships and Teaching Assistantships are available. More detailed information can be obtained by writing to the department chairman.

Master of Arts: The program usually requires three or four semesters of academic work, including participation in the Graduate Seminar—Biology 350, and research culminating in an acceptable thesis. Prior to or during the program the student must have a semester course beyond the introductory biology level in botany, zoology and physiology.

Doctor of Philosophy: The requirements are identical with those of the University and can be found in the catalog section on The Graduate School. The student's program is planned according to his needs with his program director.

COURSES

11. GENERAL BIOLOGY.

Principles and problems of biology. First semester is concerned with the botanical kingdom; second semester with the animal kingdom. One laboratory period per week. Indivisible course, except by consent of the department. Open to freshmen.

Mr. Ahmadjian, Mr. Nunnemacher.

12a. COMPARATIVE ANATOMY.

The morphology of vertebrates from a comparative standpoint, with emphasis on the evolution of animals from fish to mammals. Two lectures and two laboratory periods per week.

Mr. Nunnemacher.

14a. CRYPTOGAMIC BOTANY.

Morphology, physiology and ecology of the lower plants. Lectures will place special emphasis on algae, fungi, lichens and mosses. Laboratory work will be primarily concerned with experimentation on the sexuality and genetics of selected types of bacteria, fungi and algae. Field work will be included. Three lectures and one laboratory per week.

Prerequisite: first semester, Biology 11.

Mr. Ahmadjian.

15b. SYSTEMATIC BOTANY.

Taxonomy and classification of flowering plants, with emphasis on New England flora. A collection of 100 plants is required as well as a two-day spring collecting trip to the Berkshires. Three lectures and one laboratory period per week. Prerequisite: first semester, Biology 11.

Mr. Ahmadjian.

17b. GENERAL ECOLOGY.

Introductory study of the distribution of plants and animals, their inter-relationships and adaptations to a wide variety of environments such as seashore, sand dunes, woodlands and ponds. Field trips to Mt. Monadnock and other areas of ecological interest will be taken during laboratory periods or on Saturday. Three lectures and one laboratory period per week. Usually offered during the summer.

Mr. Nunnemacher.

18b. GENETICS.

Principles and problems of genetics.

Mr. Ahmadjian.

120b. HISTOLOGY.

Comprehensive course on tissue structure, with emphasis on the study of mammalian tissues. Two lectures and two laboratory periods per week.

Mr. Nunnemacher.

137a. CELLULAR BIOLOGY.

Development and implications of modern concepts of cells and their activities. Three lectures per week. Prerequisite: Biology 11 or its equivalent.

Mr. Reynolds.

140b. PRINCIPLES OF PHYSIOLOGY.

Introduction to basic physiological concepts at the cellular level followed by animal physiology, with emphasis on vertebrates. Three lectures per week. Prerequisite: Biology 11.
Mr. Camougis.

201. ADVANCED SYSTEMATIC BOTANY.

Not offered, 1962-63.

Mr. Ahmadjian.

204b. LICHENOLOGY.

Taxonomy and physiology of lichens and isolated lichen components. Laboratory emphasis on special projects and field work. Three lectures and one laboratory period per week. Prerequisite: Biology 14a.
Mr. Ahmadjian.

215a. INVERTEBRATE ZOOLOGY.

Not offered, 1962-63.

221a. EMBRYOLOGY.

Consideration of the fundamentals of vertebrate embryology. Two lectures and two laboratory periods per week.
Mr. Nunnemacher.

230b. BACTERIOLOGY.

Biology of the bacteria and certain related forms. Three lectures and one laboratory period per week. Prerequisites: Biology 137a, Chemistry 13 (second semester of Chemistry 13 may be taken concurrently) and consent of the instructor.
Mr. Reynolds.

231b. BACTERIAL PHYSIOLOGY.

Lecture topics and laboratory exercises selected to demonstrate chemical and physical principles underlying bacterial activities. Two lectures and two laboratory periods per week. Prerequisites: Biology 230b and consent of the instructor. Biology 240a is recommended.
Mr. Reynolds.

232a. ADVANCED BACTERIOLOGY.

Two lectures and two laboratory periods per week. Prerequisites: Biology 231b and consent of the instructor.
Mr. Reynolds.

240a. GENERAL PHYSIOLOGY.

Introduction to the physical and chemical phenomena underlying the functions common to living organisms. Two lectures and two laboratory periods per week. Prerequisites: Biology 11, Chemistry 11 and Physics 11.
Mr. Camougis.

241b. ENDOCRINOLOGY.

Not offered, 1962-63.

242b. COMPARATIVE ANIMAL PHYSIOLOGY.

Not offered, 1962-63.

244b. PRINCIPLES OF INTERMEDIARY METABOLISM.

The principles of mechanisms of biochemical reactions in an understanding of the metabolism of foodstuffs and the role of enzymes, vitamins and hormones. An acquaintance with the instrumentation in biochemical research will be presented. Usually offered in the Spring semester in the Evening College. Prerequisite: Chemistry 13.

Mr. Rosenkrantz.

249b. NEUROPHYSIOLOGY.

Physiology of central and peripheral nervous systems, receptors and muscles, considered in both vertebrates and invertebrates. Three lectures and one laboratory period per week. Prerequisite: Biology 140b or 240a.
Mr. Camougis.

250a. UNDERGRADUATE SEMINAR IN BIOLOGY.

Designed to provide experience for advanced undergraduates in the presentation and critical evaluation of research reports. Limited enrollment. Equivalent of three lectures per week. Prerequisite: consent of the instructor.

Mr. Reynolds.

260. SPECIAL PROBLEMS.

Advanced semi-independent study of an approved topic under the direction of a departmental member. Hours and credit to be arranged. Required for honors in biology.

Staff.

S. 262. INSTRUMENTAL PROCEDURES IN BIOLOGICAL INVESTIGATIONS.

Theory and application of various analytical procedures and use of modern instrumentation in biological problems. Practical introduction to analytical balance, centrifuge, vacuum distillation, pH, dialysis, chromatography, counter-current distribution, photoelectric colorimetry, fluorometry, turbidometry, spectrophotometry and spectroscopy. Instrumentation will be coordinated with techniques of tissue preparation, histochemistry and radioactive tracers. Offered in the summer.

Mr. Rosenkrantz.

300. READINGS AND RESEARCH IN BIOLOGY.

Staff.

350. GRADUATE SEMINAR.

Staff.

351a. SEMINAR IN ULTRASTRUCTURE.

Discussion of the structure of macromolecules and organelles in relation to their biological functions. Evidence from a variety of physical and chemical methods will be included, with emphasis on electron microscopy. Hours to be arranged. Prerequisite: consent of the instructor.

Staff.

360. MASTER'S THESIS.

Staff.

390. DOCTORAL DISSERTATION.

Staff.

Business Administration (*Division*)

DEPARTMENT FACULTY

F. Eugene Melder, Ph.D., *Professor of Economics*

George E. Hargest, M.B.A., *Associate Professor of Economics and Business Administration, Acting Director of Division of Business Administration*

Howard W. Nicholson, Ph.D., *Associate Professor of Economics*

George A. Balko, Jr., M.B.A., *Assistant Professor of Business Administration*

Frederick E. Bamford, M.B.A., *Assistant Professor of Economics and Business Administration*

UNDERGRADUATE PROGRAM

The Division of Business Administration presents and supervises a four-year course of study leading to the degree of Bachelor of Science in Business Administration. The pro-

gram is given cooperatively by the departments of Economics and Sociology, English, History, Government and International Relations, Mathematics, Psychology and the Natural and Physical Sciences. General supervision of the program rests with the Director and the Administrative Committee representing the faculty.

For the special requirements for the degree of Bachelor of Science in Business Administration, see that section listed under degree requirements. Students should note that the following business administration courses may not be counted toward the degree of Bachelor of Arts: 104a, 152b, 154b, 172a, 174b, 176a, 202, 204b, 206, 253, 254b, 281b.

COURSES

Accounting

100. PRINCIPLES OF ACCOUNTING.

Organization and use of financial records with emphasis on interpretation as well as the techniques of procedure. Required of B.S. in B.A. degree candidates. Indivisible course. Staff.

102. INTERMEDIATE ACCOUNTING.

Accounting principles and procedures and their application to asset, liability and proprietorship accounts. Analysis of financial statements, including statements from incomplete data and the statement of application of funds. Emphasis is on problem analysis and solution. Indivisible course. Prerequisite: B.A. 100. Mr. Hargest.

104a. FEDERAL TAX ACCOUNTING.

Legal and accounting fundamentals of federal income and social security taxes with emphasis on the preparation of returns. Prerequisite: B.A. 100.

202. COST ACCOUNTING.

Not offered, 1962-63.
Basic principles of cost accounting as related to job order, process, estimated and standard cost systems. Cost for profit determination and for managerial control and decision-making are considered. Offered in alternate years. Prerequisite: B.A. 102 or consent of the instructor. Mr. Hargest.

204b. AUDITING.

Analysis of the purpose and scope of the several classes of audits and discussion of professional ethics, auditing standards, internal control systems, audit procedures applicable to asset, liability and proprietorship accounts, and the use of worksheets and preparation of statements and reports. Prerequisite: B.A. 102.

206. ADVANCED ACCOUNTING.

Theory and practice of accounting for branches, mergers, receiverships, estates and trusts, consolidated statements, budgets, municipal accounts, and other topics of advanced nature. Offered in alternate years. Prerequisite: B.A. 102.

Economics and Finance

Descriptions of these courses can be found in the announcement of the Department of Economics and Sociology.

ECONOMICS 11. PRINCIPLES OF ECONOMICS.

Required of B.S. in B.A. degree candidates.

ECONOMICS 13a. MONEY AND BANKING.

Required of B.S. in B.A. degree candidates.

ECONOMICS 13b. PROBLEMS IN MONEY AND BANKING.

ECONOMICS 15a. PUBLIC FINANCE.

ECONOMICS 140b. CONSUMER ECONOMICS.

ECONOMICS 21b. NATIONAL INCOME ANALYSIS.

ECONOMICS 22. LABOR ECONOMICS AND LABOR PROBLEMS.

ECONOMICS 24b. HISTORY OF ECONOMIC DOCTRINE.

ECONOMICS 25b. PROBLEMS IN PUBLIC FINANCE.

ECONOMICS 26. INDUSTRIAL ORGANIZATION AND GOVERNMENTAL CONTROL.

ECONOMICS 29a. ECONOMICS OF TRANSPORTATION.

ECONOMICS 205a. INTERMEDIATE ECONOMIC THEORY.

ECONOMICS 207. INTERNATIONAL ECONOMICS.

ECONOMICS 211b. COMPARATIVE ECONOMIC SYSTEMS.

ECONOMICS 231b. ECONOMIC HISTORY OF THE UNITED STATES.

120a. CORPORATION FINANCE.

Financial structure of modern industry with emphasis on the nature of the business corporation, its financial practices, types of securities, capital structure, financial reorganization, and the problems of internal financial control. Prerequisite: Economics 11. Required of B.S. in B.A. degree candidates.

Mr. Nicholson.

121b. INTRODUCTION TO INVESTMENTS.

Principles underlying investment analysis and policy; salient characteristics of governmental and corporate securities; policies of investment companies and investing institutions, relation of investment policy to money markets and business fluctuations; security price-making forces, construction of personal investment program and exchange operation. Prerequisite: B.A. 120a.

Mr. Nicholson.

Management and Personnel Administration

170b. PRINCIPLES OF MANAGEMENT.

The principles disclosed through a study of planning, organizing, directing, assembling resources and controlling which apply equally to all fields of administration. Required of B.S. in B.A. degree candidates.

Mr. Bamford.

172a. INDUSTRIAL MANAGEMENT.

A survey of the techniques of executive control of manufacturing operations with special reference to such fields as specialization of labor, expansion, control of factors of production and internal organization.

Mr. Bamford.

176a. PRODUCTION MANAGEMENT: ANALYSIS.

The problems of management in production are analyzed and the use of modern managerial decision-making processes are employed. Prerequisite: B.A. 170b. Mr. Bamford.

182b. INTRODUCTION TO PERSONNEL MANAGEMENT. Not offered, 1962-63.
Emphasis is placed on integrating personnel management with other areas of management, including study of procuring, developing, maintaining and using an effective work force, communications, morale, and labor-management relations. Prerequisite: B.A. 170b.

184a. MANAGEMENT-LABOR RELATIONS.
Management-employee relationships with special reference to union and management bargaining. Opportunity for development of perspective and judgment regarding problems of management in shop industrial situations and labor relations law. Discussion and case methods are employed. Prerequisite: Economics 11. Mr. Melder.

271. MANAGEMENT: DECISION-MAKING.
Designed to describe quantitative methods which are useful in business decision-making, the course develops quantitative models and techniques of application. Prerequisite: B.A. 170b. Mr. Bamford.

275a. ORGANIZATION THEORY. Not offered, 1962-63.
Basic principles of organization with reference to promotion, formal and informal organization, departmentalization, line-staff relationships, decentralization and centralization, communication and the organization's bargaining relations with other organizations. Prerequisite: B.A. 170b. Mr. Bamford.

276a. MANAGERIAL ECONOMICS.
Economic concepts are analyzed and evaluated in terms of their applicability to the development of business policies. The criteria of usefulness are consistency of thought and measurability of the variables under consideration. Prerequisite: Economics 11.

290. ANALYSIS OF BUSINESS PROBLEMS.
The course is designed to integrate principles covered in specialized Business Administration courses bringing business as a whole and its economic problems into perspective. Required of all seniors in the Business Administration program. Indivisible course. Mr. Balko.

Marketing

150a. PRINCIPLES OF MARKETING.
The efficiency, social implications and public control of the activities and practices of business institutions in effecting a flow of tangible commodities between producer and consumer. Required of B.S. in B.A. degree candidates. Mr. Balko.

152b. ADVERTISING MANAGEMENT. Not offered, 1962-63.
Advertising as a tool of marketing, economic functions of advertising, advertising research, media selection, advertising organizations and testing. Mr. Balko.

154b. RETAILING PRINCIPLES.
The retailer in our economy, the store and its organizations, aspects of buying and selling, operating activities and personnel, and retail control. Offered in alternate years.

252a. MARKETING RESEARCH.
Problems faced by business executives in marketing and the ways in which methods of scientific business research can be utilized for their solution. Prerequisites: Economics 11 and B.A. 160, or the equivalent. Offered in alternate years.

253b. SALES FORECASTING.

Application of statistical procedure to the problems of predicting market demand and sales of the individual firm. Prerequisites: Economics 11 and B.A. 160, or the equivalent. Offered in alternate years.

254a. SALES MANAGEMENT.

Not offered, 1962-63.

The organization and direction of the efforts of a sales force, involving the establishment of a sales plan, placing the sales department in the company organization formulating sales policies, organizing the sales department, recruiting, training, equipping, motivating and compensating salesmen, and measuring their performance. Prerequisites: B.A. 150a and B.A. 170b or their equivalent.

Mr. Balko.

255b. MARKETING POLICIES.

Not offered, 1962-63.

Analysis of how competition, demand, cost, distribution structure and legislation affect marketing decisions of the individual company in regard to products, brands, channels of distribution, selling, advertising, sales promotion and prices. Prerequisites: Economics 11 and B.A. 150a or their equivalent.

Mr. Balko.

Statistics**160. BUSINESS STATISTICS.**

Statistical methods and techniques applied to data drawn from the business community. Includes sampling, statistical inference, estimation and decision-making, correlation—linear, multiple and curvilinear, analysis of time series and index numbers. Prerequisite: Mathematics 11. Required of B.S. in B.A. degree candidates. Indivisible course. Students ranking high in Mathematics 11 may, with the division director's consent, meet the requirement for B.A. 160 by taking Economics 29a.

Mr. Hargest.

Honors**199b. JUNIOR HONORS PROGRAM.**

Guided study for juniors planning to take B.A. 299 in their senior year.

Staff.

299. SENIOR HONORS PROGRAM.

Independent study of an approved topic for candidates for honors in accounting, management or marketing. Prerequisite: B.A. 199b.

Staff.

Candidates for honors in economics should register for Economics 280b and Economics 28.

Chemistry**DEPARTMENT FACULTY**

Gerson Kegeles, Ph.D., *Professor of Chemistry, Department Chairman*

Thomas T. Sugihara, Ph.D., *Professor of Chemistry*

Ralph I. Dorfman, Ph.D., *Professor (affiliate) of Chemistry*

William R. Nes, Ph.D., *Associate Professor of Biochemistry*

Edward N. Trachtenberg, Ph.D., *Associate Professor of Chemistry*

Wen-Yang Wen, Ph.D., *Assistant Professor of Chemistry*

Allan M. Zwickel, Ph.D., *Assistant Professor of Chemistry*

Ernest Capstack, Jr., Ph.D., *Visiting Assistant Professor of Chemistry*

UNDERGRADUATE PROGRAM

The department offers courses in chemistry for those who wish to major in the field, those who major in allied fields and those who wish an understanding of basic chemistry.

A major is required to take Chemistry 11, 13, 14a, 19, 190b and one chemistry elective; Physics 11; and Mathematics 12. Majors are strongly urged to take additional course work in mathematics and at least two years of German.

Two programs are offered for the chemistry major. The accelerated program is for students of better-than-average ability and offers an opportunity for significant honors work and concentration in advanced courses. Initial admission to this program is determined by a placement examination given at the beginning of the freshman year. The alternate, normal chemistry major's program still allows for honors work.

Majors who have not done well in the accelerated program during the freshman or sophomore years will continue with the normal program. It is also possible for students with excellent first-year records in the normal program to enter the accelerated program in the second year.

The accelerated program requires Chemistry 11, Physics 11, English 11 and Mathematics 11 (or Mathematics 12 if the student satisfies the mathematics placement examination taken at the beginning of the freshman year) during the first year; Chemistry 13 and 14a and Mathematics 12 during the sophomore year; Chemistry 19 and 190b (Mathematics 13 is recommended) during the junior year; and Chemistry 215 during the senior year.

The normal program requires Chemistry 11, English 11 and Mathematics 11 (or Mathematics 12 if the student satisfies the mathematics placement examination taken at the beginning of the freshman year) during the freshman year; Chemistry 13, Physics 11 and Mathematics 12 during the sophomore year; Chemistry 19 and 14a (Mathematics 13 is recommended) during the junior year; and Chemistry 190b during the senior year.

In addition, students in either program who intend to do graduate study in chemistry are advised to gain a reading knowledge of German and either French or Russian.

Since 1961, the department has awarded a number of stipends to promising undergraduates as part of the Undergraduate Research Participation Program of the National Science Foundation. The grants, which are chiefly for the summer months, are intended to aid students who are engaged in research under the direction of departmental faculty. This program is closely associated with the departmental honors program.

GRADUATE PROGRAM

The department offers courses leading to the degrees of Master of Arts and Doctor of Philosophy. These courses are in the fundamental fields of chemistry, supplemented by specialized courses and research work in organic, inorganic, physical and nuclear chemistry, and biochemistry.

Entering students must take a three-part written placement examination based on undergraduate inorganic and analytical, organic and physical chemistry. The examination is normally given during the week prior to registration. Performance on this examination does not affect the student's standing but is used to assist in the planning of his program of studies.

Every student is required to take Chemistry 212a, 230a, 322a, and either 218a or 340a during his residence. First-year graduate students participate for credit in Chemistry 379b, which is attended by all graduate students. Graduate students will participate in

Chemistry 380 and 350; tuition is not charged for these two non-credit courses. Additional required courses will be determined in accordance with the student's field of specialization.

In addition, students must show facility in conducting a laboratory investigation and must demonstrate a command of the field of major research interest.

Graduate scholarships, teaching assistantships and research fellowships are available. An announcement offering detailed information concerning research facilities and graduate programs of study may be obtained by writing to the department chairman.

TRAINING PROGRAM FOR STEROID BIOCHEMISTRY

A Training Program for Steroid Biochemistry has been established at the University through the cooperation of the Department of Chemistry with the Worcester Foundation for Experimental Biology. Grants for the program are provided by the National Cancer Institute and the U.S. Public Health Service. Applications are invited for appointment as a postdoctoral fellow, from persons possessing Ph.D.'s, M.D.'s, or their equivalents. The appointment is for 12 months with a stipend of \$5,500. Predoctoral appointments are also made in this program. Appointees who successfully complete the program will be awarded a certificate. Academic credit can be arranged for Chemistry 390. Fellows may be selected to remain for further work in biochemistry. Further information concerning the program will be supplied upon request to W. R. Nes, Program Director.

COURSES

11. GENERAL CHEMISTRY.

Systematic study of the elements and their principal compounds and the fundamental laws and theories of chemistry. Three lectures and three laboratory hours per week. Laboratory fee. Prerequisite for all other courses in chemistry. Divisible with consent of the instructor.

Mr. Zwickel, Mr. Wen.

13. ORGANIC CHEMISTRY.

Lectures on the principles of organic chemistry and a laboratory study of the preparation and properties of important organic compounds. Three lectures and three laboratory hours per week. Laboratory fee. Prerequisite: a grade of C- or better in Chemistry 11.

Mr. Trachtenberg.

14a. ANALYTICAL CHEMISTRY.

Principles of chemistry underlying volumetric and gravimetric analysis. Laboratory analysis of simple inorganic systems. Two lectures and six laboratory hours per week. Laboratory fee. Prerequisite: Chemistry 13, may be taken concurrently.

Mr. Sugihara.

19. PHYSICAL CHEMISTRY.

Principles of physical chemistry applied to gases, liquids, solutions, crystalline solids; chemical thermodynamics, homogeneous and heterogeneous equilibria, electrolytic conductance and transference, electromotive force, reaction kinetics, colloids. Three lectures and three laboratory hours per week. Laboratory fee. Prerequisites: Physics 11, Math. 12; Chemistry 13, 14a, may be taken concurrently. Additional course work in mathematics is recommended.

Mr. Kegeles.

180b. INSTRUMENTAL METHODS.

The principles and the application of modern instrumental techniques for the separation

and analysis of mixtures and for the characterization of pure compounds. Two lectures and six laboratory hours per week. Laboratory fee. Prerequisite: One semester of Chemistry 19 with a grade of C— or better. Mr. Kegeles and Staff.

190b. ADVANCED PHYSICAL CHEMISTRY.

Elementary quantum-mechanical treatment of the structure of nuclei, atoms and molecules. Statistical mechanics of simple systems. Three lectures per week. Prerequisite: first semester, Chemistry 19. Mr. Sugihara.

212a. INORGANIC CHEMISTRY.

Correlation of physical and chemical properties with atomic structure and periodic classification. Descriptive chemistry of the elements. Mr. Zwickel.

214. SPECIAL PROJECTS.

Individual work of an investigative nature which may include a search of chemical literature as well as laboratory work. Staff.

215. HONORS COURSE.

Primarily for majors seeking departmental honors in chemistry. A laboratory research project. Staff.

218a. NATURAL PRODUCTS.

Separation, characterization and proof of structure of biologically significant natural products. Methodology for the isolation and identification of these materials. Three lectures and three laboratory hours per week. Mr. Nes.

218b. BIOCHEMISTRY.

Enzymatic reactions, biosynthesis, metabolism and energetics of biochemical reactions. Hormonal and other control of physiologic processes, vitamins, transport. Three lectures and three laboratory hours per week. Prerequisite: Chemistry 218a. Mr. Nes.

230a. PHYSICAL ORGANIC CHEMISTRY.

Fundamentals of organic chemistry. Molecular structure, acidity and basicity, kinetics and mechanisms with emphasis on the most recent advances in organic chemical theory. Mr. Trachtenberg.

300. RESEARCH.

Staff.

321a. COLLOID CHEMISTRY.

Osmotic and sedimentation equilibrium. Diffusion, sedimentation velocity, countercurrent distribution and chromatographic theory. Offered in alternate years. Mr. Kegeles.

322a. THERMODYNAMICS.

Applications of classical thermodynamics to chemical systems. Mr. Wen.

323b. STATISTICAL MECHANICS.

Statistical mechanical analogs of thermodynamic functions and their application to chemical systems. Prerequisites: Chemistry 322a and 340a, or their equivalents. Mr. Wen.

324b. REFRACTOMETRIC TECHNIQUES.

Not offered, 1962-63.

Applications of refractometric and interferometric methods to the study of optically inhomogeneous media. Methodology employed in electrophoresis, ultracentrifugation, diffusion and chromatography. Offered in alternate years. Mr. Kegeles.

331b. ADVANCED PHYSICAL ORGANIC CHEMISTRY.

Not offered, 1962-63.

Modern interpretation of organic reaction mechanisms including molecular rearrangements, chain reactions and other reactions not covered in Chemistry 230a. Prerequisite: Chemistry 230a. Offered in alternate years.

Mr. Trachtenberg.

333b. SYNTHETIC ORGANIC CHEMISTRY.

Lectures on synthesis of organic molecules emphasizing scope and limitations of general methods, mechanism and stereochemistry. Synthesis of carbon to carbon bonds, oxidation and reduction. Prerequisite: Chemistry 230a. Offered in alternate years.

Mr. Trachtenberg.

340a. QUANTUM CHEMISTRY I.

Elementary quantum mechanics of simple systems, properties of wave functions, approximation methods for complex systems.

Mr. Sugihara.

341b. QUANTUM CHEMISTRY II.

Atomic and molecular systems, interaction between atoms. Prerequisite: Chemistry 340a. Offered in alternate years.

Mr. Sugihara.

342b. NUCLEAR AND RADIOCHEMISTRY.

Not offered, 1962-63.

Fundamentals of nuclear science; production, isolation, identification and measurement of radioactive atoms. Prerequisite: Chemistry 340a or Chemistry 190b. Offered in alternate years.

Mr. Sugihara.

343b. THEORIES OF NUCLEAR-REACTION MECHANISMS.

Not offered, 1962-63.

Current theories and models on mechanisms of nuclear reactions at medium and high energies. Prerequisites: Chemistry 341b and 342b, or their equivalents. Offered at the discretion of the department.

Mr. Sugihara.

350. SEMINAR.

Reports on research work and discussions of recently-published work.

Guest Lecturers, Staff and Graduate Students.

360b. COORDINATION COMPOUNDS.

Chemical and physical properties of complexes, including theories of coordination, stereo-isomerism, reaction mechanisms and solution stabilities.

Mr. Zwickel.

366a. INFRARED AND RAMAN SPECTROSCOPY.

Not offered, 1962-63.

General theories of vibrational spectra and application of infrared and Raman spectra to structural determination. Offered in alternate years.

379b. SPECIAL TOPICS.

Research seminars; reports by graduate students.

380. RESEARCH CONFERENCE.

Informal reports of research work being done in the laboratory.

Staff and Graduate Students.

390a. STEROID BIOCHEMISTRY.

Specialized course in the biochemistry of the steroids. Lectures and Laboratory. Double course credit.

Mr. Nes, Staff and Guest Lecturers.

Classics

DEPARTMENT FACULTY

Claude W. Barlow, Ph.D., *Professor of Classics, Department Chairman*

UNDERGRADUATE PROGRAM

Undergraduate courses are provided for the acquisition of a reading knowledge of Greek and Latin and for the study of literary masterpieces in those original languages. Courses are also offered for the candidate who wishes to major in Latin. The major should include Latin 13 during the freshman year, three advanced Latin courses and three courses in related fields to be approved by the department. Other courses, given entirely in English, deal with phases of the Greek and Roman civilizations. Students who wish to elect Elementary Greek or Intermediate Latin should consult the department as far in advance as possible since these courses are not offered every year.

COURSES

Greek

11. ELEMENTARY GREEK.

Greek grammar through forms, syntax, vocabulary and reading; selections from Xenophon's *Anabasis* or other simple prose. Open to freshmen. Indivisible course. Mr. Barlow.

12. ATTIC GREEK PROSE; HOMER's *Iliad*.

Not offered, 1962-63.

Prerequisite: Greek 11.

13. GREEK DRAMA.

Not offered, 1962-63.

Prerequisite: Greek 12 or the equivalent.

123a. GREEK CIVILIZATION.

Lectures, readings and discussion on the history, literature, art, religion and government of ancient Greece, with emphasis on the elements which have contributed most to Western civilization. Greek 123a may be counted with Latin 123b to fulfill the general degree requirement in art and music (Group D) but not in fulfillment of the requirement in foreign language.

Mr. Barlow.

Latin

11. ELEMENTARY LATIN.

Not offered, 1962-63.

12. INTERMEDIATE LATIN; VIRGIL's *Aeneid*.

Not offered, 1962-63.

This course will begin with an intensive review of forms, syntax and vocabulary for at least seven weeks. Prerequisite: two years of secondary school Latin. Offered in alternate years.

13. CATULLUS AND PLAUTUS; TERENCE AND HORACE.

Prerequisite: Latin 12 or three years of secondary school Latin.

Mr. Barlow.

15. ROMAN HISTORIANS; POETS OF THE AUGUSTAN AGE.

Not offered, 1962-63.

Prerequisite: Latin 13.

17. ROMAN PHILOSOPHERS, ROMAN SATIRE.

Mr. Barlow.

19. SURVEY OF LATIN LITERATURE.

Not offered, 1962-63.

123b. ROMAN CIVILIZATION.

Lectures, readings and discussion on the history, literature, philosophy, art, religion, law and government of ancient Rome, with emphasis on the transmission of Greek civilization and the condition of the Roman Empire during the early years of Christianity. Latin 123b may be counted with Greek 123a to fulfill the general degree requirement in art and music (Group D) but not in fulfillment of the requirement in foreign language. Given in English. Open to freshmen.

Mr. Barlow.

Comparative Literature

18. LITERATURE AND THE NATURE OF MAN.

The course is designed to serve the general student by providing him with an opportunity to investigate ideas held by outstanding literary artists of the Western World concerning the nature of man and his relation to the universe. The works are also to be studied as representatives of the cultures of which they are products. The course is planned not only to introduce the student to a body of knowledge and experience held in common by educated men and women in our society but also to help him to clarify his thinking concerning certain basic problems and to develop attitudes that are both humane and creative. The subject matter undertaken includes Sophocles' *Oedipus the King*, the *Book of Job*, the *Inferno* from Dante's *Divine Comedy*, Shakespeare's *King Lear*, Milton's *Paradise Lost*, Moliere's *Misanthrope*, Goethe's *Faust*, Part I, and selected poems of T. S. Eliot. All non-English works are read in translation. Meets the requirement for a third semester of English in addition to English 11 but not the requirement in Fine Arts. Classified as a Group C course. Open to sophomores, juniors and seniors with the consent of the instructors. Successful completion of the first semester is normally required for admission to the second semester.

Mr. Anderson, Mr. King.

ENGLISH 127a. MODERN CONTINENTAL DRAMA.

A survey of the drama of continental Europe, excluding England, from Ibsen to the drama of the absurd. Special emphasis will be given to the major figures, including Ibsen, Strindberg, Chekhov, Pirandello and Brecht. Offered in alternate years.

Mr. Schroeder.

ENGLISH 145b. MODERN CONTINENTAL FICTION.

Selected masterpieces by modern European novelists are studied closely in English translation, with attention to their philosophical, moral, social, political and psychological insights as well as to their literary forms. Writers considered include Flaubert, Turgenev, Tolstoy, Dostoyevsky, Gide, Proust, Mann, Kafka and Camus. Students are encouraged to read in the original languages when possible. Prerequisite: consent of the instructor.

Mr. Beard.

Economics and Sociology

DEPARTMENT FACULTY

James A. Maxwell, Ph.D., *Professor of Economics, Department Chairman*

F. Eugene Melder, Ph.D., *Professor of Economics*

George E. Hargest, M.B.A., *Associate Professor of Economics and Business Administration*

Frederick W. Killian, LL.B., *Associate Professor of Sociology*

Howard W. Nicholson, Ph.D., *Associate Professor of Economics*

Roger C. Van Tassel, Ph.D., *Associate Professor of Economics*

George A. Balko, Jr., M.B.A., *Assistant Professor of Business Administration*

Frederick E. Bamford, M.B.A., *Assistant Professor of Economics and Business Administration*

Philip G. Olson, Ph.D., *Assistant Professor of Sociology*

UNDERGRADUATE PROGRAM

The first aim of the department, in its undergraduate courses, is to give the student a comprehensive grasp of the underlying principles and functions of our economic and social institutions, and to develop habits of systematic and unbiased thought about these institutions. Some of the courses, however, contribute to the student's preparation for a business or professional career (Economics 13, 15, 22, 26, etc.) and are specifically recommended to students who are candidates for the degree of Bachelor of Science in Business Administration. Conversely, some students majoring in economics may be advised to elect certain courses in Business Administration which are credited toward the degree of Bachelor of Arts (Business Administration 100, 102, 120a, 121b, 150a, 160, 170b, 182b, 184, 252, 255b, 290).

Students who have an interest in Business Administration but prefer a program which is less intensive than that required of candidates for the degree of Bachelor of Science in Business Administration may enroll as candidates for the degree of Bachelor of Arts with a major in economics. Such students should take the normal college program. In the second year, they should elect Economics 11 and Business Administration 100. In the third and fourth years, they should select courses in economics and in business administration in consultation with their advisers.

Economics 11 is a prerequisite to all other courses in economics. Similarly, Sociology 11 is a prerequisite to other courses in sociology. Courses taken outside the department in partial fulfillment of the major requirement should be selected, subject to departmental approval, so as to provide a unified program centering about the student's major interest. Majors in economics will ordinarily be required to take Economics 205a, Intermediate Economic Theory.

Candidates for departmental honors will engage in a program of independent study consisting of reading and research designed in part to give them specialized training in the fields of their major interest and in part to supplement formal courses. Ordinarily a candidate will begin his honors work in the second semester of the junior year by enrolling in the Honors Seminar.

Courses in sociology will be found listed, with descriptions, immediately after the list of courses in economics.

In making elections, students should bear in mind that some advanced courses are offered only in alternate years.

GRADUATE PROGRAM

The program for the degree of Master of Arts is worked out individually with each student.

For the degree of Doctor of Philosophy, which may be taken in Economics, each student must choose six fields of study to be agreed upon as early as possible in the first year of residence beyond the M.A. A range of courses is offered in cycles of two or three years. Individual work with instructors constitutes a considerable part of the program.

The classification of courses as undergraduate, intermediate, and graduate is an elastic one. Graduate students of economics should regard certain courses in business administration as part of the offerings of the Department of Economics and Sociology.

COURSES IN ECONOMICS

F11. PRINCIPLES OF ECONOMICS.

Indivisible course. Open to freshmen.

Mr. Van Tassel.

105a. INTERMEDIATE ECONOMIC THEORY.

An analysis of contemporary price theory.

Mr. Van Tassel.

105b. NATIONAL INCOME ANALYSIS.

A study of contemporary income theory.

Mr. Van Tassel.

13a. MONEY AND BANKING.

Mr. Maxwell.

140b. CONSUMER ECONOMICS.

Theories of consumer choice making are analyzed. Rational planning and economy in important fields of consumers' decisions are explored. The role of government and private agencies in consumer education and protection are reviewed.

Mr. Melder.

15a. PUBLIC FINANCE.

The principles of governmental expenditures, revenues, and debts, with particular reference to the United States.

Mr. Maxwell.

BUSINESS ADMINISTRATION 100. ACCOUNTING.

BUSINESS ADMINISTRATION 102. INTERMEDIATE ACCOUNTING.

BUSINESS ADMINISTRATION 120a. CORPORATION FINANCE.

BUSINESS ADMINISTRATION 121b. INTRODUCTION TO INVESTMENTS.

BUSINESS ADMINISTRATION 150a. MARKETING.

BUSINESS ADMINISTRATION 160. BUSINESS STATISTICS.

BUSINESS ADMINISTRATION 170b. PRINCIPLES OF MANAGEMENT.

BUSINESS ADMINISTRATION 182b. PERSONNEL MANAGEMENT.

BUSINESS ADMINISTRATION 184. MANAGEMENT-LABOR RELATIONS.

200a. ECONOMIC GROWTH.

Analysis of economic growth theory, cultural, social and political factors making for growth. Factors within underdeveloped countries which hinder economic development will be examined.

Mr. Melder.

200b. PROBLEMS IN ECONOMIC GROWTH.

The course examines some economic and social theories pertinent to economic growth. It then considers policy problems in two areas: acceleration of development rates in

poorer countries and maintenance of growth in richer countries. Class members make studies of topics related to growth problems. Mr. Melder.

207a. INTERNATIONAL TRADE THEORY.

Emphasis is put on international value determination and the mechanisms for adjusting to international disequilibrium. Mr. Van Tassel.

207b. INTERNATIONAL ECONOMIC POLICY.

A review of the rise of the world trading economy, techniques of commercial policy, and major questions of international economic policy. Prerequisite: Economics 207a.

Mr. Van Tassel.

21a. BUSINESS CYCLES.

Not offered, 1962-63.

Analysis of recurrent business fluctuations differentiating the typical business cycle and its phases. Treatment of the history, theories of causation and proposals for control of the business cycle.

210a. ECONOMIC AND SOCIAL REFORM.

Not offered, 1962-63.

The development of economic institutions by society in its attempt to solve basic economic problems by free enterprise or planning. Attention is given to the contemporary industrial organization of the American economy.

211b. COMPARATIVE ECONOMIC SYSTEMS.

An analysis of contemporary or recently industrialized economic systems such as capitalism, socialism, and fascism, followed by a consideration of these systems as currently or recently found to exist in specific nations.

22a. LABOR ECONOMICS.

A survey of the nature of labor economics and labor problems, including the several approaches of organized workers and employers to these problems. Mr. Melder.

22b. LABOR ECONOMICS.

Applications of economic analysis to wages, unemployment, and related issues. The approach of government to labor force problems, including industrial relations and social insurance. Mr. Melder.

23b. PROBLEMS IN MONEY AND BANKING.

Central banks, particularly the Federal Reserve System; monetary standards; theories of foreign exchange; monetary policy in the United States. Prerequisite: Economics 13a or its equivalent. Mr. Maxwell.

231. ECONOMIC HISTORY OF THE UNITED STATES.

Not offered, 1962-63.

24a. HISTORY OF ECONOMIC DOCTRINE.

After a quick survey of ancient writers, attention will be given to mercantilism and the doctrinal reaction from it as expressed by the Physiocrats and the Classical economists.

25b. PROBLEMS IN PUBLIC FINANCE.

The Employment Act of 1946 is discussed and methods by which it may be implemented. Other questions examined are: reform of the federal taxation, federal debt policy, the capital budget, federal budgetary procedure. Prerequisite: Economics 15a or its equivalent. Mr. Maxwell.

26. INDUSTRIAL ORGANIZATION AND GOVERNMENTAL CONTROL.

Examination of the various forms of governmental regulation applied to our present industrial organization. Appraisal of existing governmental controls in specific industrial situations. Conducted on a seminar basis. Mr. Nicholson.

27b. INTRODUCTION TO MATHEMATICAL ECONOMICS.

An introductory survey of the use of mathematical methods in economic analysis. Special attention is given to the mathematical framework of the theory of price determination. Some attention will be given to special topics such as game theory and linear programming. Prerequisite: Mathematics 12 and consent of the instructor. Mr. Nicholson.

28. RESEARCH IN SELECTED ECONOMIC PROBLEMS.

Staff.

280b. HONORS SEMINAR.

Designed to assist honors candidates in integration of the field. Prerequisite for honors. Staff.

29a. STATISTICAL METHOD.

The nature of statistics; statistical description; statistical inference; special topics. Special emphasis will be given to theoretical and observed frequency distributions, elements of probability theory, problems of sample design and interpretation, decision theory, time series, index numbers, and measures of association and correlation. Mr. Nicholson.

Ordinarily required of all majors in Economics. With the approval of the Director of the Division of Business Administration, this half course may be substituted for B.A. 160, Business Statistics, by candidates for the degree of Bachelor of Science in Business Administration.

BUSINESS ADMINISTRATION 252. MARKETING RESEARCH.**BUSINESS ADMINISTRATION 255b. MARKETING POLICIES.****BUSINESS ADMINISTRATION 290. ANALYSIS OF BUSINESS PROBLEMS.****39a. ECONOMIC THEORY.**

Analysis of the theories of representative economists. Most attention is given to Marshall, Chamberlin, Keynes. Mr. Maxwell.

311. SEMINAR.

Staff.

370b. PROBLEMS IN QUANTITATIVE ECONOMICS.

Study of the application of mathematical and statistical techniques to economic problems. Mr. Nicholson.

300.	READING	}	IN ECONOMIC GROWTH.	Mr. Melder.
30.	THESIS			
313.	READING	}	IN MONEY AND BANKING.	Mr. Maxwell.
31.	THESIS			
322.	READING	}	IN LABOR.	Mr. Melder.
32.	THESIS			
324.	READING	}	IN MARKETING.	Mr. Balko.
33.	THESIS			

325.	READING	}	IN PUBLIC FINANCE AND FISCAL POLICY.	Mr. Maxwell.
34.	THESIS			
326.	READING	}	IN BUSINESS ORGANIZATION AND GOVERNMENT CONTROL OF INDUSTRY.	Mr. Nicholson.
35.	THESIS			
327.	READING	}	IN INTERNATIONAL ECONOMICS.	Mr. Van Tassel.
36.	THESIS			
329.	READING	}	IN STATISTICAL METHODS.	Mr. Nicholson.
37.	THESIS			
334.	READING	}	IN HISTORY OF ECONOMIC THOUGHT.	Mr. Maxwell.
38.	THESIS			
339.	READING	}	IN ECONOMIC THEORY.	Mr. Maxwell.
320.	THESIS			

Sociology

UNDERGRADUATE PROGRAM

An undergraduate whose primary interest is in sociology may meet the department requirement for a major by completing Economics 11 and three or four courses in sociology together with two or three approved courses in related departments. Related courses require departmental approval and must be discussed with advisers each registration day.

GRADUATE PROGRAM

A range of courses sufficient for the needs of candidates for the master's degree only is offered. Individual work with instructors and small intimate seminars constitute a goodly part of the graduate student's program.

COURSES IN SOCIOLOGY

F11a. GENERAL ANTHROPOLOGY.

The evaluation and development of man in the primitive world. The bio-social basis of man and culture; the elaboration of the social life of primitive man. The nature of primitive culture, and its distribution throughout the world. An analysis of primitive social structure, values, religion and culture change. Essential for sociology majors.

Mr. Olson.

F11b. PRINCIPLES OF SOCIOLOGY.

The development of man's world—the social, the normative, structure and function, some fallacies in sociological thinking, social action and interaction, social change and planning. Essential for sociology majors.

Mr. Killian.

12b. HUMAN EVOLUTION.

The evolution of man as a biological organism and the development of man's distinguishing feature: culture. The assessment of paleontological and archaeological evidence in an attempt to reconstruct the evolution of man and his culture. The use of comparative anatomy and genetics in understanding human evolution; a survey of existing theories of evolution. The reconstruction of human culture from the stone age to the Christian era: emphasis placed largely on the Middle East, Egypt, Crete, Mesopotamia, and Europe. Prerequisite: Sociology 11a, or consent of the instructor.

Mr. Olson.

13a. INDIVIDUAL AND SOCIAL STRUCTURE.

An examination of the social contexts out of which personality types emerge; the development of the social mind and self; theories of interpersonal behavior and the presentation of self; the relation between individual behavior and social structures. An analysis of the role of history, society, and psychological factors in the development of personal identity and other components of the self, including anxiety, social personality, and character. The readings will emphasize both primitive society and the modern Western world. Prerequisite: Sociology 11.

Mr. Olson.

15a. SOCIAL INSTITUTIONS.

Not offered, 1962-63.

The major social institutions of the Western World. Prerequisite: Sociology 11, or consent of the instructor with either Sociology 11a or 11b.

Mr. Killian.

16a. SOCIAL CONTROL, POWER AND POLICY.

A sociology course, stressing the phenomenon of power and authority in non-government and non-legal institutions, namely, industry, family, education, bureaucracy and other institutional areas, with backgrounds in Western Civilization but with emphasis on the United States. It will deal with the relations between policy-making and human responses for purposes of order in society as related to power and authority in the setting of social institutions with reference to values, status, role, stratification, means and ends, and in the social order.

Mr. Killian.

21b. SOCIOLOGICAL ANALYSIS.

The philosophical and logical premises underlying the collection and interpretation of empirical data and the extension of these to sociological contexts. A brief survey of the major styles of quantitative social investigation will be made: research design, survey analysis, logic of quantitative measurement techniques, and the questionnaire. Somewhat more time will be spent on community study and participant-observer techniques with an attempt to relate the qualitative data which come from these styles to quantitative data. The emphasis will be on understanding the social world by combining and interpreting the utility and fallacies of investigatory styles. Prerequisite: Sociology 11.

Mr. Olson.

24a. THE COMMUNITY.

An analysis of community studies as the basis for understanding society, with particular reference to American society. The community as a form of social organization with psychological, political, and economic underpinnings. The rise of centralized institutions and the transformation of community in twentieth century America: the links between community social structure and the total society. The historical decline of community and the emergence of pseudo-communities. The course will focus on a comparative analysis of the major American community studies. Prerequisite: Sociology 11.

Mr. Olson.

25. LAW AND SOCIETY.

First semester: Law, the social order, power and control. The basis of the legal order and legal institutions. Second semester: The problem situation, change and current legal problems. Prerequisite: first semester must be taken in order to register for the second semester.

Mr. Killian.

26b. URBAN CULTURE.

The growth and development of urbanism in Western Civilization and its impact on civilization. An analysis of the complexities of urban life; the structural components and

varieties of life styles found in American cities. The impact of urbanism on American society. Offered in alternate years. Prerequisite: Sociology 11 and one additional semester of sociology. Mr. Olson.

27. SOCIAL ORGANIZATION. Not offered, 1962-63.
Analysis of social stratification with a particular reference to American society. The social and economic basis of stratification, life styles, power, social mobility. Bureaucracies in American society as a special type of stratification embodying particular ideological and organizational patterns. Indivisible course. Offered in alternate years. Prerequisite: Sociology 11. Mr. Olson.

28. HONORS AND SPECIAL READINGS. Staff.

29. SOCIAL THOUGHT AND SOCIOLOGICAL THEORY.
A history of man's thought about society; the philosophical basis of social thought and sociological theory; current sociological theory. Both semesters required for sociology majors. Prerequisite: Sociology 11, or consent of the instructor. Mr. Killian.

38. READINGS AND RESEARCH IN SOCIOLOGY. Staff.

Education

DEPARTMENT FACULTY

Vernon Jones, Ph.D., *Professor of Educational Psychology, Department Chairman*

Henry C. Borger, Jr., Ph.D., *Professor of Education*

James M. Coffee, Ed.D., *Associate Professor of Education*

Robert Goldhammer, Ed.M., *Assistant Professor of Education*

Dayton D. Shepherd, A.M., *Lecturer in Education*

M. Evelyn Harriman, A.M. in Ed., *Lecturer in Education*

With the cooperation of Professor Warman of the Graduate School of Geography, Professor Beck of the Department of Philosophy, Miss Hughes, Dean of Women, and visiting lecturers in special areas.

UNDERGRADUATE PROGRAM

The department encourages all students who may be interested in preparing for teaching to consult with some member of its staff as early in their careers at the university as convenient. The actual election of courses in education, however, should be postponed until the junior year. During the first two years, students should complete as many of the specific requirements for the degree of Bachelor of Arts as possible, and lay a broad foundation of scholarship in the subjects in which they wish to teach.

In conformity with its policy of emphasizing the importance of scholarly background in the preparation of teachers, the department offers its courses as electives, and not as an undergraduate major. This means that the students preparing to teach should elect their majors with careful attention to extensive preparation in areas in which they wish to teach.

Education courses at the undergraduate level are offered primarily with two purposes in mind: (1) to provide introductory instruction to students who plan to teach in secondary schools and academies, and who, in preparation for such teaching, plan a fifth year of

study leading to the degree of Master of Arts in Education; and (2) to provide an integrated program of courses and internship teaching to students who, immediately upon graduation, wish to teach in elementary schools.

For students desiring to enter elementary school teaching immediately upon receiving their undergraduate degree, a program has been evolved, in cooperation with the faculty, whereby the election of at least 18 semester hours in education may be possible, including internship teaching in the first semester of the senior year. Since the amount of professional work in education forms so large a percentage of the program of study of such students in the junior and senior years, it is obvious that careful planning must be done throughout the college course to have the desired number of electives available for work in education in these last two years.

GRADUATE PROGRAM

The graduate program in education consists of two parts: a program leading to the degree of Master of Arts in Education and a new program, established in 1962, leading to the degree of Doctor of Education.

Master of Arts in Education: For graduate students wishing to prepare for teaching and/or guidance in secondary or elementary schools and academies, the department offers a fifth-year program leading to the degree of Master of Arts in Education. The program includes additional work in the student's subject-matter field, courses and seminars in education and supervised internship teaching.

Admission Requirements: In addition to the general admission requirements to the Graduate School, a personal interview is usually required by the Department of Education. Since scholarships are usually not available for the first semester to students applying for the Master of Arts in Education as a terminal program, the department is liberal in its policy concerning the date when applications will be considered.

Course requirements. The student is expected to elect one of the following groups of studies as the field in which he wishes to teach:

- (a) Mathematics and natural sciences.
- (b) History, geography, and government.
- (c) Ancient and modern foreign languages.
- (d) English, alone or in combination with some related subject.

Prior to receiving the degree, the candidate must have completed in undergraduate and graduate study combined not less than five year-courses in one of the above groups, or in a combination of groups approved by the Department of Education. At least two semester-courses in a subject-matter field must be taken as a part of the study in residence for the advanced degree and must be passed with a grade of B— or better for graduate credit. In addition to the above requirement in the subject-matter field, eight semester-courses of graduate work in education will normally be required. The program of courses to meet these requirements must be approved in advance by the department. Changes in the proportion of education and subject-matter courses may be made by the department on the basis of the candidate's previous training. Work, additional to the above requirements, either in the subject-matter field or in education, or both, may be required if this seems necessary for the adequate preparation of the candidate.

For preparation of teachers of Romance languages, a special cooperative program has been effected with the Department of Romance Languages. A limited number of Teach-

ing Assistant Scholars are appointed each year in this program in which half-time is devoted to study and 20 hours per week are required in supervised teaching in the Department of Romance Languages. In this program, two years are required for the degree. In light of the extensive internship teaching experience in this special program, the number of courses in education may be reduced to equal that in the subject-matter field. As part of the study of Romance language and literature, the departments look with favor on study abroad for at least one summer, but this is not a requirement.

Internship Teaching. The department provides opportunities for internship teaching under supervision for all graduate students majoring in education. For graduate students of the department who have not had teaching experience, satisfactory work in internship teaching is a requirement for the degree of Master of Arts in Education.

Thesis or Additional Study in Lieu of Thesis. All candidates for the degree of Master of Arts in Education must choose one of the following plans:

- (a) Prepare an acceptable thesis or special report.
- (b) Elect, in lieu of thesis, two additional semester courses in subject-matter fields (making a total of at least four-semester courses in subject-matter area).
- (c) Elect, in lieu of thesis, a double seminar in which intensive work will be required in preparing and presenting reports before fellow graduate students and the staff.

Final oral examination. The passing of a final oral examination will be required of all candidates.

Doctor of Education: The program for the degree of Doctor of Education was established in 1962 and is being organized and developed gradually, with special emphases on educational psychology, guidance and counseling. The requirements for this degree will closely parallel the requirements for the Doctor of Philosophy degree, as outlined in the catalog section on the Graduate School. Applicants for admission to the program will be expected to satisfy all requirements mentioned for the Doctor of Philosophy degree and, in addition, to submit results on the Graduate Records Examination. In special cases, foreign students may be excused from the Graduate Records Examination requirement.

COURSES

201a. EDUCATIONAL PSYCHOLOGY: CHILD GROWTH AND DEVELOPMENT.

Principles of child development, with special emphasis upon maturation, learning and personality development in the elementary school years. Mr. Goldhammer.

207b. USE OF AUDIO-VISUAL MATERIALS IN TEACHING.

Principles and practices in the use of visual and auditory material and community resources in teaching. Laboratory work required and a fee of \$8.00 charged for material.

Mr. Borger.

208a. METHODS AND MATERIALS IN SECONDARY EDUCATION.

Methods and techniques used by the teacher in junior and senior high school teaching, and a survey of materials available. Prerequisite: consent of the instructor. Mr. Borger.

210a. PSYCHOLOGICAL APPROACH TO CITIZENSHIP DEVELOPMENT.

A study and evaluation of the theoretical formulations and experimental evidence on

the problem of values as they relate to character and citizenship development among children and adolescents. Attention will be given both to activities in the schools and to other institutions and agencies in the community as they relate to values and conduct of youth. Prerequisite: consent of the instructor. Mr. Jones.

215a. INTERNSHIP TEACHING IN THE ELEMENTARY SCHOOL.

An extended period of observation and practice in teaching under supervision in regularly organized classes in elementary school. Each student is assigned to a supervising teacher, under whom he or she works for 180 hours during the semester. The first week of this period is normally devoted to observation; the remainder of the time to teaching, under supervision. Lesson planning, pupil evaluation, and supervision of pupils in non-class activities are part of the requirements of each student. Prerequisite: consent of the department. Mr. Goldhammer, Mrs. Harriman, Mr. Jones and Supervising Teachers.

20b. (GEOGRAPHY 20b.) GEOGRAPHY IN EDUCATION.

Geography in the present-day American schools. The course is designed to meet the needs of those expecting to teach geography. Mr. Warman.

27b. PRINCIPLES OF SCHOOL AND RECREATIONAL LEADERSHIP.

The basic concepts and techniques of educational and recreational leadership. Lectures, readings, discussions, and field work. Permission of the instructor required for registration. Miss Hughes.

263a. METHODS AND MATERIALS IN TEACHING OF LANGUAGE ARTS IN THE ELEMENTARY SCHOOL.

Methods and materials in the teaching of the language arts, in the middle grades, with special reference to reading. Particular emphasis will be given to provision for individual differences in teaching, and to the development of independent study skills. Field trips to selected schools will be arranged. Prerequisite: consent of the instructor. Mr. Shepherd.

260b. CURRICULUM DEVELOPMENT IN ELEMENTARY EDUCATION.

A study of the most essential materials and methods in elementary school instruction. Special attention will be given to the methods of teaching and learning in the social studies and mathematics, with brief units on the methods of cooperating most effectively with special teachers in the arts. Lectures and demonstrations by visiting specialists will be provided on particular topics, and field trips will be arranged for classroom demonstrations of certain principles and procedures. Prerequisite: consent of the instructor. Mr. Shepherd.

270. (ROMANCE LANGUAGES 270) THE TEACHING OF ROMANCE LANGUAGES.

A practicum course for Teaching Assistant Scholars serving as Interns in the Department of Romance Languages. This course will include a weekly lecture and readings, to provide a basis in the theory of applied linguistics; directed teaching in language courses; and a monthly seminar for discussion of the relations between theory and practice.

Mr. Reid and Staff.

290b. PHILOSOPHY OF EDUCATION.

The aims, processes and materials of education with special reference to the influence of philosophical ideas on educational problems. Mr. Beck.

301b. EDUCATIONAL PSYCHOLOGY: ADOLESCENT GROWTH AND DEVELOPMENT.

Principles of learning and of personality development at the adolescent level. Major

emphasis will be upon implications of normal adolescent growth and development for teaching and guidance.
Mr. Goldhammer.

303b. CURRICULUM DEVELOPMENT IN SECONDARY EDUCATION.

The basic objectives, issues, principles and procedures of curriculum organization and development in secondary schools, including the organization of learning experiences in reference to developmental and subject-matter sequences.
Mr. Goldhammer.

309b. SOCIAL LEARNING IN RELATION TO TEACHING AND COUNSELING.

The purpose of this course is to consider concepts of learning which contribute to an understanding of the development of social behavior. Principles of learning and teaching from the fields of social psychology and sociology will be studied within the context of the social environment.
Mr. Coffee.

310b. CITIZENSHIP DEVELOPMENT: SEMINAR.

Not offered, 1962-63.

Readings and evaluative reports.

Mr. Jones.

311a. PRINCIPLES, PRACTICES, AND ORGANIZATION OF GUIDANCE.

A survey of guidance and personnel work. Principles bearing upon guidance and student personnel practices will be developed. Aspects of related fields will be reviewed sufficiently to indicate the scope and content of guidance and personnel work. The problem of organizing and administering a guidance program will form an important part of this course.
Mr. Coffee.

312a. GUIDANCE: COUNSELING.

Emphasis in this course will be upon the theory and methodology of counseling and upon the management of typical counseling problems. The diagnosis and referral of behavior disorders and related personality maladjustments will be considered. Case material will be presented and analyzed. (311a must be taken simultaneously or have been taken previously.)
Mr. Coffee.

312b. GUIDANCE: OCCUPATIONAL INFORMATION AND PLACEMENT.

The first part of this course will contain instruction and training in the use of occupational information in vocational guidance along with a consideration of the psychological and sociological factors related to occupational choice and job satisfaction. The second part will emphasize the organization of the placement service.
Mr. Coffee.

314a. TESTS AND EVALUATION.

The methods and problems involved in the evaluation of abilities, interests and achievement of children and youth. Attention will be given both to standardized instruments and to teacher-made tests of achievement.
Mr. Jones.

314b. TESTS AND EVALUATION: ADVANCED PROBLEMS.

The measurement and evaluation of aptitudes, attitudes, and personality with attention to the use of such measures in teaching and counseling.
Mr. Jones.

315a. INTERNSHIP TEACHING IN THE SECONDARY SCHOOL.

An extensive period of observation and teaching in the field or fields in which the student plans to teach in secondary school. Individual supervision is given by the department and by critic teachers in cooperating schools.

Mr. Jones, Mr. Goldhammer and Supervising Teachers.

317a. INDIVIDUAL PSYCHOLOGICAL ASSESSMENT I.

Individual testing or ability and personality, including supervised experience with Stanford-Binet, Wechsler, and certain other tests. Special attention will be given to the use of data yielded by these tests for counseling and teaching. Mr. Goldhammer.

317b. INDIVIDUAL PSYCHOLOGICAL ASSESSMENT II.

A study of the less structured methods of assessment available to counselors, including the diagnostic interview, personal documents, and completion, open-end, and projective devices. Mr. Goldhammer.

319. STATISTICAL METHODS IN EDUCATIONAL EVALUATION AND RESEARCH. Mr. Jones.

321b. SOCIOLOGICAL ANALYSIS IN RELATION TO EDUCATION AND GUIDANCE.

A study of the relation of socio-economic structure of society to the problems of teaching and guidance in school and college. Visiting Lecturer.

322b. PRACTICUM IN GUIDANCE.

Supervised field work, reading, reports, and discussions. Prerequisite: 310a.

Mr. Coffee and Staff.

323. SEMINAR AND ADVANCED PRACTICUM IN GUIDANCE AND COUNSELING. Mr. Coffee.

350. RESEARCH IN EDUCATION.

Individual direction of students in their research projects.

Staff.

380b. DEPARTMENTAL SEMINARS ON CURRENT PROBLEMS. Staff and Graduate Students.

English

DEPARTMENT FACULTY

Karl O. E. Anderson, Ph.D., *Professor of English, Department Chairman*

James F. Beard, Ph.D., *Professor of English*

Charles S. Blinderman, Ph.D., *Associate Professor of English*

William H. Carter, Jr., Ph.D., *Associate Professor of English*

Stanley Sultan, Ph.D., *Associate Professor of English*

Jessie C. Cunningham, A.M., *Assistant Professor of English*

Neil R. Schroeder, Ph.D., *Assistant Professor of English*

Serena S. Hilsinger, A.B., *Lecturer in English*

Jessie L. Lightner, A.M., *Lecturer in English*

UNDERGRADUATE PROGRAM

All freshmen must take English 11 except those exempted from one or both semesters on the basis of the College Entrance Examination Board Advanced Placement Test or the Special Placement Test given by the Department of English. The requirement of a third semester of English may be satisfied by any English course beyond English 11 with the exception of English 12a and 19b.

A major in English consists of a minimum of four English courses beyond English 11 and three related courses, as follows:

1. English 13 and either English 14 or 15. Normally these courses should be taken in the sophomore year.
2. English 150b and three other half-courses in English from a group of courses open only to juniors and seniors, namely: 101b, 104, 105, 110, 117, 122b, 130a, 146b and 155b.

3. Related courses: History 10; one year in philosophy, preferably Philosophy 12; and one other course approved by the department, preferably from the following list: Fine Arts 11, Linguistics 115, French 113, German 141, Greek 123a, History 12, History 230, Latin 123b, Music 12 and Philosophy 19b.

The Honors Program in English, which offers an opportunity for extensive independent work during the junior and senior years, is open to qualified students upon application to the department.

Students who expect to do graduate work in English are strongly advised to acquire a reading knowledge of French, German and Latin.

COURSES

11. COMPOSITION AND LITERATURE.

English 11 aims (1) to improve the student's composition through a review of the principles of good writing, frequent themes, and individual conferences and (2) to enable him, through the techniques of close reading, to comprehend and enjoy literature. Open to freshmen. Staff.

12a. SPEECH.

A fundamental course in speech, including training and practice in voice production, diction, articulation, and the basic types of speech. Drill sessions and recordings help the student recognize and correct his speech deficiencies. Practice in public speaking includes practical experience in the most common types of speeches. Open to freshmen. Permission of the instructor required. Mr. Schroeder.

13. ENGLISH POETRY.

English 13 is designed to provide over the year an introduction to the various kinds of poetry, seen in relation to their historical development and considered in terms of form and technique, as well as content. During the first semester representative poems from the various literary periods are studied in an effort to provide an historical framework; during the second semester the emphasis is focussed more sharply on the different kinds of poetry and on special problems. Mr. Carter.

14. ENGLISH NOVEL.

A study of the English novel from its beginning to the end of the nineteenth century. The first semester includes Defoe, Richardson, Fielding, Smollett, Sterne, Jane Austen and three or four minor novelists. The second semester considers Scott, Thackeray, Dickens, George Eliot, Hardy, Conrad and three or four minor novelists. Some emphasis is placed on the development of the novel as a literary form. Offered in alternate years. Mrs. Cunningham.

15. ENGLISH DRAMA.

Not offered, 1962-63.

A course in theatrical techniques and the literature of the major periods of drama in the English language. The first semester covers the religious drama of the Middle Ages and the drama of Tudor, Stuart, and Restoration England, including plays by Marlowe, Shakespeare, Jonson, Beaumont and Fletcher, Dryden, Congreve and Wycherley. The second semester covers eighteenth and nineteenth century English drama and the modern drama of England, Ireland and the United States. Included are plays by Sheridan,

Goldsmith, Wilde, Shaw, Synge, Yeats, O'Casey and O'Neill. Offered in alternate years.
 First semester: Mr. Schroeder.
 Second semester: Mr. Sultan.

16a. CREATIVE WRITING.

A course designed to cultivate and guide student work in the short story, the lyric poem, and the informal essay. Class meetings deal largely with important aspects of the art of fiction; published literary works and student manuscripts are discussed. Requirement: a one-semester course in literature, which may be taken concurrently. Mr. Sultan.

19b. INTERMEDIATE COMPOSITION.

Further training in the basic principles of composition. Attention is given to word choice, sentence and paragraph structure, and organization. Exposition is emphasized. Individual conferences. Mr. Blinderman, Mr. Schroeder.

101a. CHAUCER.

After a careful study of the Prologue to the *Canterbury Tales* to acquaint the student with the essentials of Middle English vocabulary, grammar and scansion, most of the *Canterbury Tales* and all of *Troilus and Cressida* are read more rapidly. The emphasis throughout is on Chaucer's literary skill and breadth of vision. Offered in alternate years. Mr. Anderson.

104. MILTON AND THE SEVENTEENTH CENTURY.

Not offered, 1962-63.

The first semester is devoted to a study of seventeenth century English literature exclusive of Milton and the Restoration Drama; that is, metaphysical poets (Donne, Herbert, Vaughan); the seventeenth century lyric (Jonson, Herrick, Crashaw, Marvell); prose works by Bacon, Burton, Browne, Walton, Bunyan, Pepys and Evelyn; and in general, the rise of neo-classicism (Jonson, Hobbes, Dryden). The second semester considers in some detail the works of Milton and the Restoration Drama (Dryden, Etherege, Wycherley, Congreve, Farquhar). Offered in alternate years. Mr. Carter.

105. EIGHTEENTH CENTURY.

During the first semester, prose works such as Defoe's *Moll Flanders* and Swift's *Gulliver's Travels*, plays such as Gay's *Beggar's Opera* and Lillo's *London Merchant*, and the major poems of Pope and Swift are considered. During the second semester, prose works by Boswell and Johnson; novels by Richardson, Fielding, Smollet, Sterne; plays by Fielding, Goldsmith, Sheridan; and poetry by Thomson, Collins, Gray, Burns and Blake are studied. Offered in alternate years. Mr. Carter.

110. VICTORIAN LITERATURE.

Not offered, 1962-63.

In the first semester, selections from the more important British prose writers of the Victorian period are examined both for their contemporaneous significance and for their insights into problems which concern the modern mind. Authors studied include Mill, Carlyle, Ruskin, Arnold, Newman, Morris, Pater and Stevenson. In the second semester, British Victorian poets are studied in the perspective of their immediate aesthetic and intellectual backgrounds and in terms of more recent critical attitudes and standards. Tennyson, Browning, Rossetti, Swinburne, Hopkins, Hardy, Housman and Yeats are among the authors read. Offered in alternate years. Mr. Blinderman.

111. AMERICAN LITERATURE.

Through study of representative masterworks, the course traces the main currents of

American literature from Puritan times to the present. Authors read during the first semester include Sewall, Edwards, Franklin, Cooper, Poe, Hawthorne, Thoreau, Emerson, Melville and Whitman; during the second semester, Twain, Howells, Dickinson, Adams, Crane, James, Frost, Eliot, Faulkner and Hemingway.

Mr. Beard.

113. SHAKESPEARE.

Approximately twenty plays, with supplementary critical essays, are read through the year as a basis for a study of Shakespeare's development as a dramatist and his changing attitude toward life. The second semester is devoted mainly to a careful analysis of *Hamlet*, *Othello*, *Lear*, *Macbeth* and *Antony and Cleopatra*. Second semester only will be offered in 1962-63.

Mr. Anderson.

117. ROMANTIC LITERATURE.

Survey of the historical background of Romanticism and depth-study of the aesthetic significances of Romantic poetry and prose. First semester: selections from pre-Romantic poets, philosophers and Gothic novelists, with concentration on Romantic poets Blake, Wordsworth and Coleridge. Second semester: Romanticism in the works of Byron, Keats, Shelley and contemporary essayists. Offered in alternate years.

Mr. Blinderman.

122b. MODERN POETRY.

Not offered, 1962-63.

A course in English poetry during the forty-year period from the First World War to the death of Dylan Thomas and Wallace Stevens, with brief consideration of the precursors of the period. Yeats, Pound, Eliot, Auden, Frost, Stevens and Thomas are the principal poets studied. Offered in alternate years.

Mr. Sultan.

127a. MODERN CONTINENTAL DRAMA.

See description under Comparative Literature.

Mr. Schroeder.

130a. ENGLISH SEMINAR.

This seminar is devoted to the intensive study of a special subject or a small group of writers. It is limited to advanced students who are capable of independent work. Pre-requisite: consent of the instructor.

Topic for 1962-63: Yeats and Joyce. An intensive study of the principal works of Yeats and Joyce, with consideration given to the remainder of their work and to important background material. Most attention will be devoted to Yeats' lyric poetry and to *Ulysses*. Yeats' plays, Joyce's earlier fiction, and *Finnegans Wake* will also be studied in some detail.

Mr. Sultan.

143a. MODERN BRITISH FICTION.

Not offered, 1962-63.

The course deals primarily with the work of the four major British writers of fiction during the twentieth century: Conrad, Lawrence, Woolf and Joyce. Offered in alternate years.

Mr. Sultan.

144b. CONTEMPORARY AMERICAN FICTION.

Not offered, 1962-63.

A critical introduction to the best American fiction since about 1900, with emphasis on its aesthetic values, sociological insights, and philosophical implications. Authors read include Dreiser, James, Anderson, Fitzgerald, Hemingway, Wolfe, Faulkner and Mailer. Offered in alternate years.

Mr. Beard.

145b. MODERN CONTINENTAL FICTION.

See description under Comparative Literature.

Mr. Beard.

146b. INTRODUCTION TO LITERARY CRITICISM.

This course involves the discussion of a selection of critics, from Aristotle to the present, who have been particularly influential in English and American literature. Offered at the discretion of the department.

Mr. Carter.

150b. SENIOR SURVEY.

This seminar seeks to help the senior major integrate his other English courses and to fill in any significant gaps in his English program. The reports and discussions trace, from early writing to the present, such concepts as Classicism, Romanticism, Realism and Naturalism, Tragedy, Comedy, Satire and Humanism. Required of departmental majors.

Mr. Anderson.

155b. JUNIOR HONORS SEMINAR.

Restricted to juniors who are candidates for honors in English. The purpose of the seminar is to prepare the student for the advanced independent study of literature. It comprises such subjects as the definition of genres, the nature of metaphor, alternative critical approaches to literature and the editing of texts.

Mr. Sultan.

Fine Arts DEPARTMENT FACULTY

Samuel P. Cowardin, M.A., *Assistant Professor of Fine Arts*

Sante Graziani, M.F.A., *Associate Professor (affiliate) of Fine Arts*

UNDERGRADUATE PROGRAM

The major in fine arts is offered jointly by Clark University and the School of the Worcester Art Museum. The program consists of 13 courses taken at Clark and seven courses at the museum school. Fine Arts 11 and History 10 are required among the university courses.

Candidates for admission who wish to major in fine arts must submit, with their application form, a portfolio of about a dozen representative pieces of their work in drawing, painting, design, etc. Each piece should be clearly marked with the candidate's name and home address.

COURSES

11. INTRODUCTION TO WESTERN ART.

Lectures during the first four weeks deal with general topics, such as design principles and technical procedures. The remainder of the course treats significant works of architecture, sculpture and painting in the light of their times. New students will not be admitted in the second semester.

Mr. Cowardin.

111. BASIC DRAWING AND PAINTING.

Introduction to the drawing and painting of objects in the field of vision; theory and practice in the statement of line, form and light and shade; study of the nature and use of materials and instruments; exercises from objects and from living models; observation of method and accomplishment found in the museum's collections. Nine hours of studio work a week at the museum school. Indivisible course.

Mr. Graziani.

12b. SURVEY OF WESTERN PAINTING.

General problems of pictorial expression are treated as well as the historical aspects of style. The course may not be counted in addition to Fine Arts 11.

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| 15. ART OF THE RENAISSANCE IN ITALY. | Mr. Cowardin. |
| 16. ART OF THE SEVENTEENTH AND EIGHTEENTH CENTURIES. | Not offered, 1962-63. |
| 191a. ART OF THE ANCIENT NEAR EAST AND INDIA. | Not offered, 1962-63. |
| 192a. ART OF CHINA AND JAPAN. | Mr. Cowardin. |
| 199. ADVANCED PAINTING AND DESIGN. | |
- General designation for all courses at the museum school above the elementary level.
 Ordinarily open only to majors in the practice of art. Staff of the Museum School.

Freshman Orientation Course

ORIENTATION. A required non-credit course for freshmen. Two periods per week are required for most of the first semester. Additional class periods are planned during the second semester to discuss the selection of a major field of study.

Topics include the history and nature of the university; liberal and vocational education; the curriculum; the individual in relation to the institution, the staff, and fellow students; the library; reading, note taking; methods of study; examinations; and the physiology of sex.

GENERAL ORIENTATION

Dean Borger, Dean Hughes.

PHYSIOLOGY OF SEX

Dr. Deering, Dr. Kressler.

Geography

DEPARTMENT FACULTY

Raymond E. Murphy, Ph.D., *Professor of Economic Geography,*
Director of Graduate School of Geography
 Samuel Van Valkenburg, Ph.D., *Professor of Geography, Emeritus*
 J. W. Birch, Ph.D., *Professor of Geography, Editor of Economic*
Geography
 Henry J. Warman, Ph.D., *Professor of Geography, Secretary of*
Graduate School of Geography
 Robert W. Kates, Ph.D., *Assistant Professor of Geography*
 Rodman E. Snead, A.M., *Assistant Professor of Geography*
 Guy H. Burnham, A.M., *Instructor in Geography*

The Graduate School of Geography was established in 1921, and Clark was, therefore, the second university in the United States to offer, in a separate department, graduate training in geography. At the present time, a comprehensive program of graduate training is provided leading to the Master's and Doctor's degrees. In addition, the Staff offers a full series of courses for undergraduates within the liberal program of Clark University.

UNDERGRADUATE PROGRAM

Majors in geography are required to take seven year-courses, or the equivalent, in geography and related fields. At least four, and not more than five, of these courses must be in geography.

Geography 10, Elements of Geography, is usually taken in the freshman year, or as early as possible after the selection of Geography as a major. One or two of the following courses may be taken during the sophomore year: Geography 15a, Geography 16b, Geography 191. Number "2" courses should not be undertaken until the junior or senior years. Geography majors should plan their work in related fields so that the basic courses prerequisite to the advanced courses of the junior and senior years are taken in the freshman and sophomore years.

Subjects in Group A (Science and Mathematics) strongly recommended by the staff are mathematics, geology and biology. However, where special interest is expressed in physics, chemistry, or psychology, the student's program can be planned to include these subjects.

Related fields are found listed under Group B (Social Science). History 10 is recommended for the freshman year. Courses recommended for the sophomore year are: Economics 11, Government 15, History 12, Sociology 11. More advanced work in the fields of sociology, international relations, psychology, and philosophy will depend largely upon the individual student's interest.

A junior or senior pursuing an "honors program" in geography is afforded an opportunity to study in the Graduate School of Geography. For example, a superior student, after petitioning and receiving approval of the College Board and the Secretary of the Graduate Board, may take graduate courses. On rare occasions an undergraduate student has been invited to participate in the Fall Field Camp of the Graduate School.

Independent honors projects are under the personal supervision of one of the staff members. Such work must be completed within the semester in which it is started, or proof advanced that the study warrants more time. The staff also conducts an oral examination to ascertain the achievement of an "honors student."

THE GRADUATE SCHOOL OF GEOGRAPHY

The Graduate School of Geography offers qualified students advanced training in geography. The map collection, libraries, and special laboratories for cartography provide unusual facilities for research work in residence.

Staff members spend part of their time in travel and research studies. While in residence, they offer regular courses of instruction and direct advanced research work. Visiting lecturers, both American and foreign, supplement the regular staff.

Master of Arts: Candidates will pass written examinations in at least six of the following fields: climatology, economic geography, human and cultural geography, land utilization, physiography, political geography, regional geography, resources, and urban geography. Proof of proficiency in cartography is also required. Oral examinations for the master's degree cover four fields approved by the staff.

Doctor of Philosophy: Candidates are required to submit superior written examinations, and to pass an oral examination covering six fields approved by the staff. The oral examination is scheduled after language requirements are fulfilled. In general, a year of work beyond the master's degree should prepare candidates for the oral examination preliminary to acceptance as candidates for the doctor's degree and to work on dissertations.

Theses and Dissertations

The master's thesis will be written on a topic within the field of the student's special interest. The research will be carried out after the student has passed the oral examina-

tion and will be supervised by a member of the staff. At least seven weeks before the date of the commencement at which the degree is expected to be conferred, the candidate must submit a preliminary draft of the thesis to his major professor; this will then be circulated among the staff members for approval. After corrections, if any, have been made and approval given by the major professor, the thesis is typed in final form. The original copy of the final draft is delivered to the Registrar at least four weeks before the date of commencement and a carbon copy is presented to the department.

The doctoral dissertation is expected to make an original contribution to the subject of geography. At least ten weeks before the date of the commencement at which the degree is expected to be conferred, the candidate must submit a preliminary draft to his major professor for circulation among the staff members. If the dissertation is approved, a date for its oral defense will then be set. The candidate is expected to defend his dissertation and, at the discretion of the examining committee, may be questioned on all of his graduate work. If the defense is adequate, and after any necessary corrections have been made and approved by the major professor, the dissertation is typed in final form. An original copy must be delivered to the Registrar and a carbon copy to the department at least four weeks before the date of commencement. Students should note that the Registrar's copy of the dissertation must include 2 official title pages, academic history page, an abstract, and a *précis*.

All dissertations are microfilmed and, for this reason, it is required that illustrations be in black and white.

Students' Fees

The field camp fee is approximately \$80; it covers camp tuition, board and lodging, transportation, maps, drafting supplies, and the use of meteorological instruments and other equipment. The fee is payable to the camp director on or before the first day of camp.

The workroom fee, \$5 a semester, is payable on November 1 and March 1. It helps to maintain equipment used by the graduate students.

The classroom fee, \$5 a semester, is payable on November 1 and March 1. It is for mimeographing and for the maintenance, in part, of the classroom wall maps and other equipment.

Distinctive Features and Specialization

The Clark Graduate School of Geography has the substantial advantage of being centrally situated within New England, a region of varied rural and urban landscapes and renowned cultural centers.

The School has become a traditional "port of call" for professors of geography from this and other countries, and the graduate students have opportunities to visit with them as well as to attend the lectures which are arranged.

Graduate students are assigned desks and shelves in the Geography Workroom. Staff offices are located in the same building; conferences, therefore, are easily arranged. Both workroom and classroom have direct connections with the periodical room and the open shelves of the University Library. The Libbey Library, a special room adjoining the Workroom, serves for general conferences and seminars.

The Graduate Students, through the years, have maintained the Clark University Geographical Society. It publishes, twice a year, *The Monadnock*, a booklet which keeps geography Alumni in touch with each other and with current activities in the School.

The professional magazine *Economic Geography* is edited by a staff member. Started at Clark University over a quarter of a century ago, it is the only magazine published in English that specializes in the economic phases of geography.

An outstanding feature of the Graduate School of Geography is the Field Camp program of three weeks' duration at the beginning of the Fall term. Resident candidates for graduate degrees in geography attend the Field Camp. The program includes studies of land utilization, physiography, urban geography, and weather, with special training in mapping and other field techniques. Following return to the campus, about ten days are allowed for the completion of field reports.

Graduate course work begins on the second Monday after the close of the Field Camp; it ends about May 1, giving students time to coordinate their work prior to the oral examinations.

There are certain basic courses for graduate students. The Staff recognizes, however, that it is impossible for anyone to become proficient in all phases of geography and, therefore, encourages candidates for the doctor's degree to specialize.

COURSES

10. ELEMENTS OF GEOGRAPHY. (Indivisible)

Physical phases of geography and application of some principles of geography to selected regions. Open to freshmen and sophomores. Juniors and seniors admitted only by permission of the instructor. Mr. Kates, Mr. Warman.

15a. MANAGEMENT AND CONSERVATION OF RESOURCES.

An introduction to natural resource problems in an era of rising population pressure. Prerequisite: Geography 10 and Economics 11 or their equivalent. Mr. Kates.

16b. ECONOMIC GEOGRAPHY.

An introductory study of the major areal differences in both kind and level of economic development. Prerequisite: Geography 10 or Economics 11, or equivalent. Mr. Birch.

191. CARTOGRAPHY AND GRAPHICS.

Preparation of maps, graphs, charts, block drawing. Restricted to twenty. (See instructor). Mr. Burnham.

20b. GEOGRAPHY IN EDUCATION.

Not offered, 1962-63.

Geography in the present-day school system; designed to meet needs of those teaching or expecting to teach geography as a separate subject or in the Social Studies.

22. WEATHER AND CLIMATE.

Practical exercises in meteorology and climatology, use of weather instruments, discussion of various theories, climatic regions. Prerequisite: Geography 10 or the equivalent.

Mr. Snead.

201. POLITICAL GEOGRAPHY.

Major political problems of the world as related to geographic factors and applied to selected regions.

Mr. Van Valkenburg.

214. REGIONAL PHYSIOGRAPHY.

Mr. Snead.

282a. REGIONAL GEOGRAPHY OF ANGLO-AMERICA.

Not offered, 1962-63.

283a. REGIONAL GEOGRAPHY OF MIDDLE AMERICA.

Not offered, 1962-63.

283b. REGIONAL GEOGRAPHY OF SOUTH AMERICA.

Mr. Warman.

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| 285a. REGIONAL GEOGRAPHY OF EUROPE. | Not offered, 1962-63. |
| 285b. REGIONAL GEOGRAPHY OF SOUTHERN ASIA. | Not offered, 1962-63. |
| 291. ADVANCED CARTOGRAPHY. | Mr. Burnham. |
| 310b. PRINCIPLES OF GEOMORPHOLOGY. | Mr. Snead. |
| 34. RURAL LAND USE. | |
| A study of the factors associated with the spatial differentiation of rural land uses. Particular attention will be given to the use of land for agriculture and to relevant methods of area research. | |
| | Mr. Birch. |
| 35. PROBLEMS OF RESOURCE MANAGEMENT. | |
| Appraisal of methods of estimation, projection and allocation of resource availability and needs. | |
| | Mr. Kates. |
| 36. PROBLEMS IN ECONOMIC GEOGRAPHY. | |
| Various research fields, research methods, and detailed techniques in economic geography. | |
| | Mr. Murphy. |
| 37. HUMAN AND CULTURAL GEOGRAPHY. | Mr. Warman. |
| 341b. QUANTITATIVE METHODS IN GEOGRAPHY. | |
| Some problems of conception, measurement, and evaluation in geographical research. | |
| | Mr. Kates. |
| 361. URBAN GEOGRAPHY. | |
| The modern city from the geographic viewpoint, with emphasis on the American city. | |
| | Mr. Murphy. |
| 399a. FIELD METHODS AND STUDIES. | Staff. |

SEMINARS

At least one seminar is required each semester of graduate students.

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| 310. SPECIAL PROBLEMS IN GEOMORPHOLOGY. | Not offered, 1962-63. |
| 340a. SEMINAR ON DEVELOPMENT OF GEOGRAPHIC RESEARCH AND QUANTIFICATION. | Mr. Birch. |
| 350b. SEMINAR ON RESOURCES. | |
| 360. SEMINAR IN PROBLEMS OF MANUFACTURING GEOGRAPHY. | Not offered, 1962-63. |
| 362b. SEMINAR IN PROBLEMS OF URBAN GEOGRAPHY. | Mr. Murphy. |
| 370b. SEMINAR IN CULTURAL GEOGRAPHY. | Mr. Warman. |
| 371. SEMINAR IN POPULATION GEOGRAPHY. | Not offered, 1962-63. |
| 390a. SEMINAR IN AIR PHOTO INTERPRETATION. | Mr. Snead. |

RESEARCH COURSES

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|-----------------------|---------------------------|
| 300. URBAN GEOGRAPHY. | 306. ECONOMIC GEOGRAPHY. |
| 301. GEOMORPHOLOGY. | 307. HUMAN GEOGRAPHY. |
| 302. CLIMATOLOGY. | 308. REGIONAL GEOGRAPHY. |
| 304. LAND USE. | 309. POLITICAL GEOGRAPHY. |
| 305. RESOURCES. | |

Geology

DEPARTMENT FACULTY

Wesley E. Bryers, A.B., *Instructor in Geology*

UNDERGRADUATE PROGRAM

The department does not offer an undergraduate major. The general course, Geology 12, is closely related to geography and is usually required for majors in that department.

COURSES

12. GENERAL GEOLOGY.

Introduction to geology, origin of the earth, its development through time and the succession of plant and animal life. First semester deals with common rocks, their structure, origin and occurrence; geological activities of the air, streams and sea; nature of glaciers, volcanoes and earthquakes, and age of the earth. Laboratory work consists of rock and mineral identification and map interpretation. Second semester deals with the origin of continents and ocean basins, their development through time; the glacial periods and antiquity of man; development of surface features of North America; and evolution of life through geologic time. Laboratory work consists of geologic map interpretation and fossil identification. Occasional field trips. Indivisible course. Open to freshmen.

Mr. Bryers.

121a. INTRODUCTORY MINERALOGY.

Not offered, 1962-63.

Study of crystallographic, physical and chemical properties of common minerals.

Mr. Bryers.

122b. ECONOMIC GEOLOGY.

Not offered, 1962-63.

Study of the origin and structural relations of mineral deposits, their geographic distribution and economic importance.

Mr. Bryers.

131b. STRUCTURAL GEOLOGY.

Analysis of rock deformation based on the principles of mechanics and the utilization of research data obtained from laboratory and field investigations. The principles of structural geology will be applied to the interpretation of major fold, fault and fracture systems of the earth. Field trips.

Mr. Bryers.

141a. THE FOSSIL RECORD.

A systematic survey of the morphology, taxonomy and geologic history of groups of organisms commonly found as fossils. The techniques and principles used for interpreting the fossil communities in terms of age and environment will be discussed. The evolutionary aspects of the fossil record will be emphasized.

Mr. Bryers.

German

DEPARTMENT FACULTY

Karl J. R. Arndt, Ph.D., *Professor of German, Department Chairman*

James S. Edwards, A.M., *Associate Professor of German*

Herbert J. Nerjes, A.M., *Assistant Professor of German*

UNDERGRADUATE PROGRAM

The Department of German intends primarily to give its students a liberal and human-

istic education by presenting and interpreting the language, life, and literature of German-speaking peoples. Students interested in German as their major should consult the department chairman.

COURSES

11. INTRODUCTORY GERMAN.

A comprehensive introduction to the written as well as the spoken language. The course aims at acquisition of all four skills: reading, writing, speaking and understanding. The language laboratory will be used to assist in reaching these goals. There will be a special section, *Review and Progress*, giving students who have studied German in high school but who were unable to win advanced placement through the Advanced Placement Examination an opportunity to accelerate. Indivisible course. Staff.

12. INTERMEDIATE GERMAN.

After a review of German grammar this course will concentrate on "Gebrauchsprösa" and pragmatic German. Newspaper articles will serve as material for the practice of reading and writing skills. Aural and oral training will be continued with the assistance of the language laboratory. Prerequisite: German 11 or advanced placement. Indivisible course. Staff.

130. INTRODUCTION TO GERMAN CLASSICISM.

Reading and interpretation of works of Lessing, Goethe, and Schiller. Aural and oral assignments in the language laboratory based on recordings of performances or readings of these works in German-speaking countries. Prerequisite: German 12 or advanced placement. Indivisible course. Mr. Arndt.

132. ADVANCED ORAL AND WRITTEN GERMAN.

Intensive training in the aural, oral and written use of the language in preparation for teaching and government service. Required of majors. Prerequisite: German 12 or advanced placement. Indivisible course. Mr. Nerjes.

134. RECENT GERMAN DRAMA.

Reading and interpretation of recent German dramatic works which have been performed over radio, television or on the legitimate stage. Prerequisite: German 12 or advanced placement. Indivisible course. Mr. Edwards.

141. GERMANIC CIVILIZATION.

Illustrated lecture course on the literature, history and fine arts of German lands from the Holy Roman Empire to the present day, with emphasis on the Reformation, Age of Enlightenment and the Classical Period. Given in English. Mr. Edwards.

154. HISTORY OF GERMAN LITERATURE.

Not offered, 1962-63.

Survey of German literature from earliest times to the present. Course replaces German 152 and 153. Given in German. Prerequisite: German 132 or consent of the instructor. Indivisible course. Mr. Arndt.

161a. GERMAN LYRIC POETRY.

Not offered, 1962-63.

German lyric poetry from Klopstock to the present. Given in German. Prerequisite: German 132 or consent of the instructor. Indivisible course. Mr. Arndt.

162b. FAUST.

Not offered, 1962-63.

Reading and discussion of the major versions of the *Faust* theme, including the medieval *Faustbuch* and Marlowe's *Faustus*. Goethe's *Faust I* and *II* will be stressed. Given in German. Prerequisite: German 132 or consent of the instructor. Indivisible course.

Mr. Arndt.

164a. THE GERMAN NOVEL OF SELF-DEVELOPMENT.

A study of the German *Entwicklungsroman*, starting with von Eschenbach's *Parzival*, in modern German. Given in German. Prerequisite: German 132 or consent of the instructor. Indivisible course.

Mr. Arndt.

165b. FROM EXPRESSIONISM TO CATASTROPHE.

German literature from World War I to World War II. Given in German. Prerequisite: German 132 or consent of the instructor.

Mr. Arndt.

166. GERMAN DRAMA SINCE KLEIST.

Not offered, 1962-63.

Given in German. Indivisible course.

Mr. Edwards.

200b. SEMINAR.

Not offered, 1962-63.

Principally for majors but open to other qualified upperclassmen. Research into selected area of German literature. Prerequisite: consent of the instructor.

Mr. Arndt.

History, Government and International Relations

DEPARTMENT FACULTY

Sherman S. Hayden, Ph.D., *Professor of International Relations,*
Department Chairman

Robert F. Campbell, Ph.D., *Professor of American History*

H. Donaldson Jordan, Ph.D., *Professor of English History*

Dwight E. Lee, Ph.D., *Professor of Modern European History*

Clifford K. Shipton, Ph.D., *Professor (affiliate) of American History*

George A. Billias, Ph.D., *Associate Professor of American History*

Morris H. Cohen, Ph.D., *Associate Professor of Government*

Gerald N. Grob, Ph.D., *Associate Professor of American History*

Daniel R. Borg, M.A., *Instructor in European History*

George H. Merriam, Ph.D., *Lecturer in American History*

UNDERGRADUATE PROGRAM

The department offers basic courses in the fields of American, European and British history, American and European government, and international relations. It offers major programs of study in history or government and participates in the interdepartmental programs of International Relations and American Civilization.

All departmental majors must take History 10, preferably in the freshman year; Economics 11, normally before the end of the sophomore year; and History 205a and 205b, in either the junior or senior year. Majors in government should also take Government 15 before the end of the sophomore year. Further elections in this and related departments are determined by the student's special interest but they are expected to include at least two upper-class courses in this department, in addition to History 205.

Non-majors who have not taken History 10 may elect other courses offered by the

department with permission of the instructor if, in his judgment, the student has an adequate background for the course.

GRADUATE PROGRAM

The principal fields of graduate study are American, English and European history and politics, modern diplomacy, and the international relations of the United States, Europe, the Commonwealth and the Far East.

Master of Arts: The program for the degree of Master of Arts is worked out individually with each student, who may choose to concentrate on history, government or international relations. All students are required to take the departmental seminar, History 30a.

Doctor of Philosophy: The program for the degree of Doctor of Philosophy may be taken in history or international relations. Each student must choose six fields of study, to be agreed upon as early as possible in the first year of residence beyond the Master of Arts and after a conference between the student and the department staff. In a history program, at least one field must be chosen from related subjects. In an international relations program, work in economics and geography is expected as part of an integrated program, to be arranged by the department in consultation with the other departments concerned. Three of the six fields may be completed either by course work or by passing written examinations. The other three are tested by an oral examination given by the staff. The passing of the six fields by courses or examination constitutes the "preliminary examination."

The doctoral dissertation, written in one of the six fields which is designated as the special field, must be submitted in complete preliminary draft to the supervising instructor not later than March 1 of the year in which the candidates hope to receive the degree. The final examination for the doctorate covers both the dissertation and the special field.

COURSES IN HISTORY

10. EUROPE AND THE UNITED STATES SINCE 1500.

A study of selected topics designed to illustrate the evolution of modern Western society. The emphasis throughout will be on the thought patterns underlying institutional developments.

Mr. Borg, Mr. Campbell, Mr. Grob.

12. HISTORY OF ENGLAND.

Constitutional history is emphasized, particularly in the first semester. Offered in alternate years.

Mr. Jordan.

205a. INTRODUCTION TO POLITICAL PHILOSOPHY.

A study of the main trends of Western political thought with reference to their underlying social, political and economic realities. Required of departmental majors.

Mr. Jordan.

205b. RECENT POLITICAL THOUGHT.

The conflicting ideologies of our time in their development since the French Revolution. Required of departmental majors.

Mr. Jordan.

208a. TOTALITARIANISM.

A seminar on the origins, ideology and operation of the German Nazi and Italian Fascist regimes.

Mr. Borg.

209b. CHURCH AND STATE IN MODERN EUROPE.

A seminar on church-state relations since the Reformation, with special reference to political attitudes and involvements of established churches since the French Revolution.

Mr. Borg.

21b. FOUNDATIONS OF MODERN EUROPE.

Not offered, 1962-63.

The later Medieval and the Renaissance periods. Offered in alternate years. Mr. Lee.

210. EUROPE, 1648-1815.

The rise of the absolute state, the old regime, the French Revolution and Napoleon. Attention is given to the rise of science, the Enlightenment and the origins of liberalism and rationalism. Offered in alternate years.

Mr. Borg.

211. EUROPE, 1815-1939.

The development of the major European nations and their interrelations. Offered in alternate years.

Mr. Lee.

213b. EUROPEAN DIPLOMATIC HISTORY, 1848-1918.

Mr. Lee.

215. GERMANY SINCE 1500.

Not offered, 1962-63.

Offered in alternate years.

Mr. Borg.

22b. TUDOR AND STUART ENGLAND.

The period from 1485 to 1688 with attention to the social backgrounds of English literature and conditions leading to the colonization of America. Offered in alternate years.

Mr. Jordan.

225a. RECENT HISTORY OF THE BRITISH EMPIRE COMMONWEALTH.

Developments since about 1900. Offered in alternate years.

Mr. Jordan.

230. INTELLECTUAL HISTORY OF THE UNITED STATES.

American ideas from the late 18th century to the present.

Mr. Grob.

231. AMERICAN COLONIAL HISTORY.

From the first English settlements through the establishment of the federal union.

Mr. Billias.

234a. AMERICAN DIPLOMATIC HISTORY.

Not offered, 1962-63.

From 1776 to about 1941. Offered in alternate years.

Mr. Hayden.

235a. THE UNITED STATES IN THE TWENTIETH CENTURY.

Not offered, 1962-63.

Offered in alternate years.

Mr. Campbell.

236b. AMERICAN POLITICAL HISTORY, 1828-1877.

Offered in alternate years.

Mr. Grob.

237. ERA OF THE AMERICAN REVOLUTION.

Not offered, 1962-63.

Mr. Billias.

238. THE FEDERALIST AND JEFFERSONIAN ERAS.

Opportunity for group discussion and individual research on the period.

Mr. Billias.

239. INTRODUCTION TO RESEARCH IN AMERICAN COLONIAL HISTORY.

Lectures on selected topics and opportunities for research in the field; discussion of problem areas. Admission only by permission of the instructors.

Mr. Merriam, Mr. Shipton.

274b. THE MODERN FAR EAST. Not offered, 1962-63.
Primarily, international relations in the region since 1895. Offered in alternate years.
Mr. Hayden.

281a. RUSSIA, 1700-1917. Not offered, 1962-63.
A general history of Imperial Russia from the time of Peter the Great, emphasizing the development and nature of autocracy and serfdom, and Russia's emergence and problems on the international scene.

282b. HISTORY OF THE SOVIET SYSTEM. Not offered, 1962-63.
A brief survey of Marxist ideology and pre-1917 Russian history and a concentration on the political, economic (non-technical) and social evolution of Russia under the Communist regime.

30a. DEPARTMENT SEMINAR.
Introduction to bibliography and methods of research. Required of all first-year graduate students in the department. Mr. Grob and the Staff.

314a. EUROPEAN INTERNATIONAL RELATIONS, 1870-1918. Mr. Lee.

331b. PROBLEMS IN THE HISTORY OF THE UNITED STATES.
Individual research topics, supplemented by readings and discussion in the field of United States history. Mr. Grob.

332. PROBLEMS IN AMERICAN COLONIAL HISTORY. Mr. Billias.

GRADUATE READING AND THESIS COURSES

31. READING } IN THE HISTORY AND INTERNATIONAL RELATIONS OF EUROPE.
310. THESIS } Mr. Borg, Mr. Lee.

32. READING } IN THE HISTORY AND INTERNATIONAL RELATIONS OF ENGLAND
320. THESIS } AND THE BRITISH EMPIRE. Mr. Jordan.

33. READING } IN THE HISTORY OF THE UNITED STATES. Mr. Billias, Mr. Grob.
330. THESIS }

38. READING } IN RUSSIAN HISTORY.
380. THESIS }

COURSES IN GOVERNMENT

14. INTERNATIONAL RELATIONS.
A survey of world politics since 1914, with emphasis on the shifting patterns of power and the rise of new nations and revolutionary doctrines. The second semester deals mainly with World War II and later events. Mr. Hayden.

15. INTRODUCTION TO AMERICAN GOVERNMENT.
A short survey of the theories of the origins and purposes of the state is followed by a study of American government with emphasis on contemporary problems of the federal government. Mr. Cohen.

240b. SEMINAR IN INTERNATIONAL RELATIONS.

Basic ideas and their application to current problems. Required for international relations majors. Open to a limited number of non-majors at the discretion of the instructor.

Mr. Hayden.

241. INTERNATIONAL LAW AND ORGANIZATION.

First semester deals with the historic principles of international law and their application in the modern world. Second semester deals with the institutions created to handle problems of commerce, welfare and collective security on an international basis. Offered in alternate years.

Mr. Hayden.

25a. COMPARATIVE GOVERNMENT.

Not offered, 1962-63.

The governments and politics of Great Britain and the major European powers. Offered in alternate years.

Mr. Cohen.

251a. AMERICAN POLITICAL PARTIES.

American party organizations, pressure groups and the electorate in American politics, with emphasis on current problems and trends in the field. Offered in alternate years.

Mr. Cohen.

252b. INTRODUCTION TO PUBLIC ADMINISTRATION.

Not offered, 1962-63.

An examination of the role of administration in modern government, including problems of personnel administration, fiscal management, administrative regulation and government organization. Offered in alternate years.

Mr. Cohen.

254. AMERICAN CONSTITUTIONAL HISTORY AND LAW.

A study of the major developments in our constitutional system and law, with emphasis in the second semester on contemporary cases and problems.

Mr. Campbell, Mr. Cohen.

255b. THE LEGISLATIVE PROCESS.

Not offered, 1962-63.

A study of policy-making in Congress, involving problems of legislative organization and procedure, leadership and presidential-legislative relationships, examined primarily by the case method and by individual research on particular pieces of recent legislation.

Mr. Cohen.

341. PROBLEMS IN INTERNATIONAL RELATIONS.

Mr. Hayden.

351. PROBLEMS IN AMERICAN GOVERNMENT.

Mr. Cohen.

GRADUATE READING AND THESIS COURSES

34. READING }
340. THESIS } IN INTERNATIONAL RELATIONS.

Mr. Hayden.

35. READING }
350. THESIS } IN AMERICAN AND COMPARATIVE GOVERNMENT AND POLITICS.

Mr. Cohen.

International Relations

See the announcements of the Department of History, Government and International Relations and those listed under Interdepartmental Majors.

Interdepartmental Majors

The faculty has authorized interdepartmental majors in order to provide a broader study of certain fields than can be fitted into any departmental program while yet preserving the unity of subject essential to a major. An interdepartmental major includes eight or more required courses. At present two programs are offered under this plan.

International Relations

INSTRUCTOR IN CHARGE:

Sherman S. Hayden, Ph.D., *Professor of International Relations.*

FRESHMAN AND SOPHOMORE YEARS

History 10	Europe and the United States since 1500
Economics 11	Principles of Economics
Geography 10	Elements of Geography
Government 14	International Relations

JUNIOR AND SENIOR YEARS

Government 240b	Seminar in International Relations
Government 241	International Law and Organization
Geography 201	Political Geography
Economics 207	International Economics
Economics	One-half course to be selected

American Civilization

INSTRUCTOR IN CHARGE:

Gerald N. Grob, Ph.D., *Associate Professor of American History.*

FRESHMAN YEAR

History 10	Europe and the United States since 1500
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SOPHOMORE YEAR

At least two of the following courses:

Government 15	Introduction to Government
Economics 11	Principles of Economics
Sociology 11	Principles of Sociology

JUNIOR AND SENIOR YEARS

History 230	Intellectual History of the United States
English 111	American Literature

Two and one-half additional courses chosen with the consent of the instructor in charge of the program.

Linguistics

115. MAN AND LANGUAGE.

An introduction to the analysis of the nature and function of human language; its role in the life of individuals and societies. What is language? What is the relation between language and thought? Does our language partially determine how we perceive the world? Why do languages change, and how? Is communication the primary function of language? How does language bind social groups together? How are the world's languages related to each other? Why don't we have a world language? The course is designed for the general student who wishes to know more about the nature of the uniquely and universally human institution of language, and for the student or teacher of English or foreign languages who is interested in the light which linguistic science can give upon the relations between his field and other areas of life and knowledge.

Mr. Reid.

Mathematics

DEPARTMENT FACULTY

Daniel Gorenstein, Ph.D., *Professor of Mathematics, Department Chairman*

John S. Stubbe, Ph.D., *Associate Professor of Mathematics*

Henry Frandsen, Ph.D., *Assistant Professor of Mathematics*

Seymour Hayden, A.M., *Assistant Professor of Mathematics*

UNDERGRADUATE PROGRAM

The department offers courses leading to a major in mathematics, courses necessary for the study of physical and certain social sciences and courses for the student wishing to learn the fundamental concepts of mathematics primarily for their cultural value.

The departmental major requires five year-courses in mathematics and two year-courses in an allied field of study. Mathematics 12, 13, 113 and 214 are required; while Mathematics 11 cannot be counted among the five year-courses in mathematics.

GRADUATE PROGRAM

The department offers courses leading to the degree of Master of Arts. The program is designed to give the student an understanding of the basic concepts of the major fields of mathematics and to fit him for further study in the subject if his talents warrant it.

Master of Arts: A reading knowledge of one foreign language is required. A thesis is also required, the subject of which may be chosen in consultation with a member of the department.

COURSES

11. FUNDAMENTALS OF MATHEMATICS.

Elementary study of mathematical logic, postulational systems, algebra, point sets, analytic geometry, the concept of function, trigonometric functions, natural numbers, cardinal numbers, the concept of limit, and some brief attention to elementary probability and statistical inference.

Mr. Hayden.

12. CALCULUS.

Introduction to differential and integral calculus; essential for further study in mathematics as well as for the study of applications in the natural and social sciences.

Mr. Frandsen.

13. INTERMEDIATE CALCULUS.

Geometric and physical applications of integration, sequences and series, three-dimensional analytic geometry, partial differentiation, multiple integrals, and a brief introduction to differential equations. Prerequisite: Mathematics 12.

Mr. Stubbe.

14a. INTRODUCTION TO MATHEMATICAL LOGIC.

Axiomatic development of sentential and restricted predicate calculus; theory of classes, relations and functions; introduction to cardinal and ordinal numbers.

Mr. Frandsen.

14b. ELEMENTARY THEORY OF NUMBERS.

A study of the properties of divisibility, prime numbers, congruences and residues. Prerequisite: Mathematics 12.

Mr. Frandsen.

15b. DIFFERENTIAL GEOMETRY.

Not offered, 1962-63.

Elements of the metric geometry of curves and surfaces in Euclidean space developed by methods of calculus and analytic geometry extended to three dimensions. Prerequisite or to be taken concurrently: Mathematics 13.

16a. INTRODUCTION TO GEOMETRY.

Not offered, 1962-63.

Topics from projective geometry, non-Euclidean geometry and the foundations of Euclidean geometry. Prerequisite: Mathematics 13 or a B- or better in Mathematics 12.

17. MATHEMATICAL STATISTICS.

Not offered, 1962-63.

Elements of probability theory, frequency distribution test of significance, large and small sampling, analysis of variance. Prerequisite: Mathematics 12.

18a. POINT-SET TOPOLOGY.

Not offered, 1962-63.

Set theory, topological spaces, continuous functions and metric spaces. Prerequisite: Mathematics 13 or at least a B- in Mathematics 12.

113. INTRODUCTION TO LINEAR ALGEBRA AND ANALYSIS.

First semester: mathematical induction, matrices, determinants, vector spaces, Euclidean vector spaces and quadratic forms. Second semester: the real number system, sequences, limits of functions, continuity, uniform continuity, differentiability and elements of point-set topology. Prerequisite: Mathematics 12 or at least a B+ or higher in Mathematics 11 plus consent of the instructor. Mathematics majors will normally take Mathematics 113 concurrently with Mathematics 13.

Mr. Gorenstein.

214. ADVANCED CALCULUS.

Topics selected from among partial differentiation, integration, infinite series, improper integrals, Fourier series, integral transform and the calculus of variations. Prerequisite: Mathematics 13.

Mr. Hayden.

215. MODERN ALGEBRA.

Introduction to the theory of groups, rings, integral domain, fields, vector spaces, matrices and related topics. Prerequisite: Mathematics 12 or consent of the instructor.

Mr. Frandsen.

216. FUNCTIONS OF A COMPLEX VARIABLE.

Not offered, 1962-63.

Analytic functions, line integrals, conformal mapping, Riemann surfaces. Prerequisite: Mathematics 214 or consent of the instructor.

218. FUNCTIONS OF A REAL VARIABLE.

Foundations of the real number system, algebra of sets, transfinite arithmetic, metric spaces, topological spaces, sequences and series, measure theory, differentiation and integration and functional analysis. Prerequisite or taken concurrently: Mathematics 214, or consent of the instructor.

Mr. Stubbe.

219. PROJECTIVE GEOMETRY.

Not offered, 1962-63.

Synthetic and analytic projective geometry, including the projective theory of conics. Prerequisite: Mathematics 12 or consent of the instructor.

220. APPLIED MATHEMATICS.

Ordinary and partial differential equations and their applications, vector analysis, infinite series, line and surface integrals, Bessel functions, Legendre polynomials and Fourier series, introduction to functions of a complex variable. Prerequisite: Mathematics 13.

Mr. Stubbe.

221. ALGEBRAIC TOPOLOGY.

Introduction to algebraic topology including homotopy theory, singular and simplicial homology, and application to general spaces.

Mr. Hayden.

222. TOPICS IN ANALYSIS.

Content will be changed from year to year to fit the needs of graduate students. Staff.

223. TOPICS IN ALGEBRA.

Content will be changed from year to year to fit the needs of graduate students. Staff.

225. ADVANCED MODERN ALGEBRA.

Galois theory, group theory, Wedderburn structure theorems for rings and linear algebras, introduction to algebraic number fields. Prerequisite: Mathematics 215.

Mr. Gorenstein.

Music

DEPARTMENT FACULTY

Relly Raffman, A.M., *Associate Professor of Music*

UNDERGRADUATE PROGRAM

The department offers courses designed to teach students how to listen to music intelligently, to develop a comprehension of music on its own terms and to acquaint students with representative works from various periods of music history. A major in music is not currently offered.

COURSES

12. INTRODUCTION TO MUSIC.

The first semester deals with the essential elements of musical construction insofar as they affect the listener's understanding of the compositional process. The second semester is a study of musical style from the Renaissance through the late 19th century. No previous practical experience with music is necessary. Open to freshmen. Mr. Raffman.

13a. TWENTIETH CENTURY MUSIC.

A survey of the monumental changes in musical style since 1900. The works of Debussy, Ravel, Stravinsky, Hindemith, Bartok, the so-called "serial" composers and the electronic school will be studied; the influence of Jazz on both American and European music will be discussed, as well as Jazz in its pure state. Prerequisite: one semester of Music 12 or consent of the instructor. Mr. Raffman.

14b. PROBLEMS IN THEORY.

Application of theoretical principles to analysis and composition. Prerequisite: consent of the instructor. Open to freshmen. Mr. Raffman.

15b. KEYBOARD MUSIC.

Not offered, 1962-63.

An introductory course in musical construction and style as seen through the medium of the keyboard. No previous practical experience with music is necessary. May be substituted for but not credited in addition to the first semester of Music 12. Open to freshmen.

Philosophy

DEPARTMENT FACULTY

Robert N. Beck, Ph.D., *Professor of Philosophy, Department Chairman*
Jefferson A. White, M.A., *Assistant Professor of Philosophy*

UNDERGRADUATE PROGRAM

The department offers courses to students who wish to broaden their perspective and trace relations among the various fields of knowledge and to students who wish to major in philosophy.

The major consists of four courses in philosophy and three additional courses in related fields. The latter are determined according to the student's special interest.

COURSES

11a. LOGIC AND SCIENTIFIC METHOD.

Principles of valid reasoning and inductive methods and their application to problems of the natural and social sciences. Consideration of the relations between logic and problems of value. Open to freshmen. Mr. Beck.

11b. PROBLEMS OF PHILOSOPHY.

Nature and method of philosophy. Application of philosophical method to contemporary personal and social problems. Detailed analysis of some typical problems in various fields of philosophy. Mr. Beck.

12. HISTORY OF PHILOSOPHY.

Movements of philosophical thought from the early Greeks to the present day. First semester: Greek and Medieval Philosophy. Second semester: Modern Philosophy. Not open to freshmen. Prerequisite for second semester: one half-course in philosophy or History 10. Mr. White.

13a. PROBLEMS OF ETHICS.

Consideration of important ethical theories to acquaint the student with problems and scope of ethics and to aid him in the formulation of an ethical outlook. Offered in alternate years. Open to juniors and seniors. Mr. Beck.

14a. SOCIAL PHILOSOPHY.

Not offered, 1962-63.

Principles underlying social structure and functions. Examination of the goals, purposes, norms and ideals of social process, and the relation of that process to the individual good. Offered in alternate years. Open to juniors and seniors. Mr. Beck.

15a. PHILOSOPHY OF RELIGION.

The nature of religion as revealed by an examination of the history of world religions and representative types of contemporary religious philosophy. Open to juniors and seniors. Prerequisite: one half-course in philosophy. Mr. White.

16. CONTEMPORARY PHILOSOPHY.

Important thinkers representative of modern developments in philosophy, with emphasis on the historical roots of their thought. Prerequisite: one and one-half courses in philosophy, including Philosophy 12, or consent of the instructor. Mr. Beck.

17a. READINGS IN ANCIENT PHILOSOPHY.

Advanced work in the writings of one or more of the important philosophers of the ancient period. Offered in alternate years. Prerequisites: one and one-half courses in philosophy, including Philosophy 12, or consent of the instructor. Mr. White.

17b. READINGS IN MODERN PHILOSOPHY.

Advanced study of representative thinkers of the modern period. Offered in alternate years. Prerequisite: one and one-half courses in philosophy, including Philosophy 12, or consent of the instructor. Mr. White.

18b. HISTORY OF AMERICAN PHILOSOPHY.

Survey of important philosophical ideas in America with emphasis on their relationship to American experience. Mr. Beck.

19b. ESTHETICS.

The nature of art, the characteristics of esthetic experience, and the relation of art to the human enterprise as a whole. Special reference is made to representative figures in contemporary philosophy. Open to juniors. Mr. White.

EDUCATION 290b. PHILOSOPHY OF EDUCATION.

Description offered in the department statement under Education.

Physics

DEPARTMENT FACULTY

Roy S. Anderson, Ph.D., *Professor of Physics, Department Chairman*

John H. Muller, Ph.D., *Associate Professor of Physics*

Earl A. Hays, Ph.D., *Associate Professor (affiliate) of Physics*
Minoru Fujimoto, Ph.D., *Assistant Professor of Physics*
Roger P. Kohin, Ph.D., *Assistant Professor of Physics*

UNDERGRADUATE PROGRAM

The department offers courses to students wishing to major in physics. While emphasis is placed on preparation for graduate study, the major will also assure adequate training for teaching or professional work in physics.

The major consists of Physics 100, 101, 200, 204 and 207, Mathematics 13, and one course in chemistry, usually Chemistry 11. Students preparing for graduate work in physics are urged to register for one course in mathematics each year and to elect Physics 201, 202, 206 and 208.

While Physics 11 or its equivalent is the normal prerequisite for all other courses in physics, students may attain advanced standing in physics by passing a qualifying examination at this level of subject matter. Mathematics 12 is a prerequisite for courses with numbers beginning with the numeral 2.

Students in the Honors Program must register for at least one course credit of Physics 235 and, at the conclusion of this course, must submit to the department a thesis based on this work. Recommendation for Honors in Physics is determined in part by the quality of the thesis and the performance of the student on a comprehensive examination in physics.

GRADUATE PROGRAM

The department offers courses leading to a Master of Arts degree in physics and to a Doctor of Philosophy in Chemical Physics. The latter degree is offered jointly with the Department of Chemistry and consists of a combination of courses in chemistry, mathematics and physics. While under the administrative guidance of the Department of Chemistry, students in this joint program conduct dissertation research in the Department of Physics.

Departmental research emphasizes the nature of the solid state, with particular reference to electric, magnetic and related phenomena. Research is being conducted in electron spin resonance, nuclear magnetic resonance, nuclear quadrupole resonance, organic semiconductors and radiation damage. Geophysical research in geomagnetism and oceanography is also being conducted with the Woods Hole Oceanographic Institution.

COURSES

11. GENERAL PHYSICS.

The principles of mechanics, heat, wave motion, electricity, and atomic and nuclear physics. Lecture: 3 hours; Laboratory: 3 hours. Prerequisite: consent of the instructor is required in the absence of two years of high school algebra and trigonometry, or the equivalent. Indivisible course, except by consent of the instructor. Mr. Muller.

100. PHYSICAL MEASUREMENTS.

Laboratory course in procedures for obtaining, interpreting and evaluating experimental data. Theory of errors. Experiments in mechanics and heat. Occasional lectures. Laboratory: 3 hours throughout the year for each one-half course credit. Mr. Anderson.

101. INTERMEDIATE MECHANICS.

The statics and dynamics of a particle, systems of particles, and rigid bodies, using vector analysis. Two hours of lecture throughout the year for one-half course credit. Concurrent registration required in Physics 100 for one-half course credit throughout the year. Prerequisite: Mathematics 12, or concurrent registration. Mr. Hays.

200. ADVANCED PHYSICAL MEASUREMENTS.

Laboratory experiments in optics, electricity and magnetism, electronics, or atomic, molecular and nuclear physics. Laboratory: 3 hours throughout the year for each one-half course credit. Staff.

201b. ADVANCED MECHANICS.

Lagrangian and Hamiltonian formulations. Kinematics and dynamics of rigid bodies. Special relativity. Prerequisite: Physics 101. Mr. Muller.

202a. THERMODYNAMICS AND KINETIC THEORY.

Not offered, 1962-63.

The laws of thermodynamics, the kinetic theory of gases, and an introduction to statistical mechanics. Offered in alternate years.

204. ELECTRICITY AND MAGNETISM.

Mathematical theory of electrostatics, electrodynamics, direct, alternating and transient currents, and magnetism. Maxwell's theory of electromagnetism. Concurrent registration in Physics 200 is required to the extent of one-half course credit throughout the year. Prerequisite: Mathematics 13 or concurrent registration. Mr. Fujimoto.

205b. ELECTRONIC DEVICES AND CIRCUITS.

Not offered, 1962-63.

Principles of electron tubes and transistors, with emphasis on design of electronic circuits. Three lectures and three laboratory periods per week. Offered in alternate years.

206b. PHYSICAL OPTICS.

Not offered, 1962-63.

The phenomena of diffraction, interference and polarization of light as explained by the electromagnetic theory. Offered in alternate years.

207. QUANTUM PHYSICS.

An introduction to quantum mechanics. The structure and properties of atoms and nuclei as revealed by Schrodinger wave mechanics. Concurrent registration in Physics 200 is required to the extent of one-half course credit throughout the year. Prerequisite: Mathematics 13. Mr. Kohin.

208a. INTRODUCTION TO THE SOLID STATE.

Crystal structure: symmetry and space groups. Chemical bonding: ionic and covalent crystals. Thermal and elastic properties. The band theory of metals and semi-conductors. Dielectric and magnetic properties. Low temperature properties, including superconductivity. Offered in alternate years. Mr. Anderson.

218. PHYSICS AND THE EARTH SCIENCES.

Not offered, 1962-63.

The application of physics to problems in oceanography, seismology, and the atmosphere, with emphasis on the physical problems common to all. Selected readings are utilized. One-half course credit through the year. Mr. Hays.

230. SPECIAL TOPICS IN PHYSICS.

Independent studies in physics to provide for special needs. Offered only to physics majors with consent of the advisor. Given each semester. Staff.

235. HONORS.

Independent experimental or theoretical research in physics.

Staff.

303a. KINETIC THEORY AND STATISTICAL MECHANICS.

Not offered, 1962-63.

The dynamics of gas particles as interpreted by the kinetic theory of ideal and non-ideal gases. Maxwell-Boltzmann canonical distribution. Fermi-Dirac and Bose-Einstein quantum distributions. The partition function. Applications to classical and quantum states of gases, specific heats, transport phenomena, and electric and magnetic properties of matter.

304a. ELECTRODYNAMICS.

Not offered, 1962-63.

Maxwell's equations, scalar, vector, and retarded potentials, electromagnetic radiation, boundary value problems.

305. QUANTUM MECHANICS.

Not offered, 1962-63.

Wave mechanics and the Schrodinger equation. Stationary and time-dependent approximation methods. The matrix formulation. The Dirac equation. Prerequisite: Physics 207.

307b. THEORY OF THE SOLID STATE.

Not offered, 1962-63.

Application of quantum mechanics to solids. Thermal, electric, magnetic, and optical properties. Energy bands and their structure. Prerequisite: Physics 208a.

308a. THEORY OF ATOMIC AND MOLECULAR SPECTRA.

Not offered, 1962-63.

The electronic configuration of atoms: the Pauli principle and the building-up principle. Fine structure and the spinning electron. The Zeeman and Paschen-Back effects. Nuclear effects: hyperfine structure. The structure and properties of molecules as revealed by rotational, vibrational, and electronic spectra. Covalent and ionic bonds. Prerequisite: Physics 305 or equivalent.

309b. MAGNETIC RESONANCE.

Not offered, 1962-63.

The theory of the electron spin and nuclear magnetic resonance experiments, particularly in solids. The spin Hamiltonian and the magnetic interaction between particles. Chemical bonds and their description by the molecular orbital method. The hydrogen bond. Prerequisite: Physics 308a.

340. SEMINAR.

Seminars on various topics of contemporary interest are offered each year. Emphasis is on discussions of recent literature in each field and the presentation of department research in the area. One-half course credit throughout the year.

Mr. Anderson.

350. RESEARCH.

Staff.

Psychology

DEPARTMENT FACULTY

Seymour Wapner, Ph.D., *Professor of Psychology, Department Chairman*

Heinz Werner, Ph.D., *Professor of Psychology, Emeritus*

Tamara Dembo, Ph.D., *Professor of Psychology*

David Moriarty, M.D., *Professor (affiliate) of Clinical Psychology*

Leslie Phillips, Ph.D., *Professor (affiliate) of Psychology*
 Joseph Weinreb, M.D., *Professor (affiliate) of Psychology*
 Robert W. Baker, Ph.D., *Associate Professor of Psychology*
 Clemens E. Benda, M.D., *Associate Professor (affiliate) of Psychology*
 Walter H. Crockett, Ph.D., *Associate Professor of Psychology*
 Gordon T. Gwinn, Ph.D., *Associate Professor of Psychology*
 Bernard Kaplan, Ph.D., *Associate Professor of Psychology*
 Donald M. Krus, Ph.D., *Associate Professor of Psychology*
 Morton Wiener, Ph.D., *Associate Professor of Psychology*
 Joachim F. Wohlwill, Ph.D., *Associate Professor of Psychology*
 Roger Bibace, Ph.D., *Assistant Professor (affiliate) of Psychology*
 Theodore Leventhal, Ph.D., *Assistant Professor (affiliate) of Psychology*
 Herbert Lipton, Ph.D., *Assistant Professor (affiliate) of Psychology*
 Joseph H. McFarland, Ph.D., *Assistant Professor (affiliate) of Psychology*
 Harold Goodglass, Ph.D., *Lecturer in Psychology*
 Robert Kastenbaum, Ph.D., *Lecturer in Psychology*
 Werner Koella, M.D., *Lecturer in Psychology*
 Anthony Varjabedian, M.D., *Lecturer in Psychology*
 Peter H. Wolff, M.D., *Lecturer in Psychology*
 Victor H. Pentlarge, M.D., *Consultant to the Psychological Clinic,*
Psychiatrist
 Polly Deweese, M.S., *Consultant to the Psychological Clinic, Psychiatric*
Social Worker
 Janet Switzer, Ph.D., *Consultant to the Psychological Clinic*

UNDERGRADUATE PROGRAM

The department offers courses for students majoring in psychology, majors in allied fields and students wishing an orientation to the field of psychology for general cultural development.

Psychology 11 is prerequisite to all other psychology courses. Majors are required to take Psychology 11 and 212. Students preparing for graduate work should obtain a reading knowledge of French and German.

GRADUATE PROGRAM

The department offers courses leading to both the Master of Arts degree and the degree of Doctor of Philosophy. Where the department feels that a student lacks necessary undergraduate preparation in psychology and related fields, specific courses of study will be prescribed.

Master of Arts: The customary program is five courses, including experimental psychology, statistical methods and three additional courses, supplemented by the writing of a thesis in the area of special interest.

Doctor of Philosophy: The student is required to pass with distinction five courses during the first year of graduate study and a minimum of four courses during the second year. He is required, normally at the end of the second year, through written examination, to demonstrate his competence in psychology as a whole and in an area of specialization.

In addition, the student is required to demonstrate his ability to conduct independent research as evidenced by the presentation of an acceptable dissertation. Research for the dissertation should normally be completed during the fourth year at the University; however, the length of the program will vary depending upon individual circumstances. At a final oral examination a student is required to defend his dissertation and to show his competence in the general field of psychology and in his area of specialization.

The overall aim of the graduate program is to provide the student with a general, integrated background covering the various areas of psychology. Within this emphasis more specialized training—with special stress on experimental analysis—is available in the following areas: perception, learning, thinking and problem-solving, language, social, and personality.

There are also three more formalized programs which provide specialized training in the areas of Clinical, Developmental and Rehabilitation Psychology.

Clinical Psychology Program. The department offers a four-year A.P.A.-approved program in clinical psychology leading to the degree of Doctor of Philosophy. Beyond the standards of proficiency in the general field of psychology expected of all students, the student in the Clinical Program will be required to demonstrate special mastery in the understanding of concepts in the clinical area and in the use of clinical methods. One year of internship is included in this four-year program. Provision is made for a wide variety of practical experiences in cooperating institutions, clinics and agencies. There are over 20 institutions and agencies, in Worcester, Boston, Providence and surrounding areas which cooperate in providing such practicum and research facilities.

Developmental Psychology Program. This program is designed to train students in a comparative-developmental analysis of behavior. It emphasizes not only the study of human development from infancy to old age, but also stresses the application of developmental principles, concepts and methods to problems of general psychology, psychopathology, social psychology, etc.

Rehabilitation Research Training Program. This program is designed to prepare graduate students for research on psychological problems related to rehabilitation of physically and mentally handicapped persons. Students obtain their primary research training by working as apprentices in real-life settings and in clinical facilities under the guidance of staff members working in the rehabilitation area. There is also an emphasis on the formulation of real-life problems in general theoretical terms, and in their analysis through laboratory experimentation.

Financial Aid. In addition to University scholarships, fellowships, teaching assistantships, and stipends, the department has available such forms of financial support as United States Public Health Service and Office of Vocational Rehabilitation training stipends, Veterans Administration traineeships, and research assistantships.

INSTITUTE OF HUMAN DEVELOPMENT

Associated with the department is the Institute of Human Development, which has three aims: first, to integrate various research programs dealing with developmental problems; second, to bring to Clark University scholars, teachers, and research workers from disciplines for which developmental problems are pertinent such as anthropology, biology, and certain areas of medicine; third, to train research workers on pre- and post-doctoral levels in the comparative-developmental approach to behavior.

COURSES

11a. GENERAL PSYCHOLOGY.

Introduction to the principles of human behavior.

Mr. Wapner.

11b. GENERAL PSYCHOLOGY.

Introduction to the principles of human behavior.

Mr. Wapner.

103b. THE ABNORMAL PERSONALITY.

Not offered, 1962-63.

Development of the abnormal personality and a survey of the major types of abnormal behavior. Prerequisite: Psychology 172a.

Mr. Baker.

150a. INTRODUCTION TO CHILD PSYCHOLOGY.

The normal development of the child from infancy up to adolescence, with emphasis on the areas of physical and motor development, cognitive processes and language, and emotional and fantasy life.

Mr. Wohlwill.

150b. PERSONALITY AND SOCIAL DEVELOPMENT OF THE CHILD.

The development of the child's personality and interpersonal behavior, in relation to family, peer group and culture.

152b. PSYCHOLOGY OF ADOLESCENCE.

Development of personality during adolescence with special emphasis on personality changes of the adolescent in a modern urbanized culture.

Mr. Kastenbaum.

160b. INTRODUCTION TO QUANTITATIVE METHODS IN PSYCHOLOGY.

Problems of psychological measurement and statistical evaluation of psychological data.

Mr. Wohlwill.

170a. SOCIAL PSYCHOLOGY.

The role of social factors in the behavior of individuals and of groups, including such topics as attitudes, prejudice, leadership and personality and culture.

Mr. Crockett.

172a. PSYCHOLOGY OF PERSONALITY.

The various theoretical approaches to the study of personality, with emphasis on trait theories, typologies, field theory and psychoanalysis. Also considered are the determinants of personality development and methods of appraising personality.

Mr. Bibace.

201a. LEARNING AND MOTIVATION.

Role of learning and motivation in behavior.

Mr. Gwinn.

202b. PSYCHOLOGY OF THINKING.

Types of thought processes and methods of investigating them, with emphasis on concept formation, imagination, creative thought, reasoning and problem solving.

Mr. Gwinn.

209. DEVELOPMENTAL APPROACHES TO BEHAVIOR.

Application of developmental concepts to various facets of infra-human and human behavior, with emphasis on the ontogenesis of perception, concept-formation, symbolic activity (including play and speech), etc., in human beings.

Mr. Kaplan.

212. EXPERIMENTAL PSYCHOLOGY.

General survey of experimental psychology with emphasis on scientific methods and laboratory technique. Lecture: 2 hours; Laboratory: 3 hours. Prerequisite: Psychology 106b or consent of the instructor.

Section A: Mr. Krus. Section B: Mr. Wiener.

- 220a. MATHEMATICAL APPROACHES TO PSYCHOLOGY. Not offered, 1962-63.
Intensive analysis of several mathematical models used in psychology. Offered in alternate years. Prerequisite: Mathematics 12 or consent of the instructor. Mr. Crockett.
- 222a. PHYSIOLOGICAL PSYCHOLOGY.
A consideration of physiological mechanism of relevance to psychological problems. Mr. McFarland.
- 223b. ADVANCED SOCIAL PSYCHOLOGY.
Detailed examination of the methods and theory appropriate to a specific area in social psychology. In different years the course will cover interpersonal perception, attitude development and change, conformity to group norms, small group processes and similar topics. Included in the course is the preparation of an original investigation in the content area. Mr. Crockett.
- 230b. SENIOR SEMINAR IN PSYCHOLOGY.
Intensive discussion of special problems in psychology. Staff.
301. EXPERIMENTAL METHOD IN PSYCHOLOGY.
Experimental Method considered generally and in its application to problems of perception. Lecture: 2 hours; Laboratory: to be arranged. Mr. Wapner.
302. STATISTICAL METHODS.
Descriptive statistics, statistical inference and experimental design in psychology. Mr. Crockett.
303. HISTORY AND SYSTEMS OF PSYCHOLOGY.
Historical development of theories, concepts and methods in psychology. Mr. Gwinn.
- 304a. PHYSIOLOGICAL ASPECTS OF BEHAVIOR, I.
Neuro-anatomy as related to behavior. Mr. Varjabedian.
- 305a. PHYSIOLOGICAL ASPECTS OF BEHAVIOR, II. Not offered, 1962-63.
Neurophysiological aspects of behavior. Mr. Koella.
311. CLINICAL METHODS, I.
Observation, interviewing and testing. Mr. Leventhal.
- 312b. THEORIES OF DEVIANT BEHAVIOR.
Deviant behavior as viewed by various theories. Clinical and experimental evidence is examined. Mr. Bibace.
- 313a. PRINCIPLES AND CONCEPTS UNDERLYING PSYCHOLOGICAL TESTS. Not offered, 1962-63.
Problems of psychological assessment by non-projective tests.
315. ADVANCED CHILD PSYCHOLOGY.
Major dimensions and determinants of ontogenetic changes in behavior. Methodological problems in the study of children and in the assessment of developmental change. Offered in alternate years. Mr. Wohlwill.
316. OBSERVATIONAL METHODS IN THE STUDY OF CHILDREN. Not offered, 1962-63.
Offered in alternate years. Mr. Wohlwill and Staff.
- 317b. BEHAVIOR IN INFANCY. Mr. Wolff.

321. HIGHER MENTAL PROCESSES.

Experimental research pertaining to such functions as remembering, classifying, problem-solving, reasoning and concept-forming. Mr. Kaplan.

322. ORGANISMIC-DEVELOPMENTAL APPROACHES TO BEHAVIOR.

Basic categories of the organismic-developmental approach to life sciences, with examination of the application of these categories to a wide range of problem areas in psychology. Mr. Kaplan.

323. PSYCHOLOGY OF LEARNING.

Theoretical viewpoints and experiments in the field of learning. Mr. Gwinn.

324. THEORIES OF PERSONALITY.

Comparison of various theoretical approaches to the study of personality. Mr. Wiener.

325. ADVANCED SOCIAL PSYCHOLOGY.

Intensive analysis of various theoretical systems in social psychology. Offered in alternate years. Mr. Crockett.

326b. THEORY OF PSYCHOLOGICAL SCALING.

Analysis of mathematical approaches to psychological scaling. Prerequisite: Psychology 220a. Offered in alternate years. Mr. Crockett.

331. CLINICAL METHODS, II.

Application of various clinical methods in the assessment of personality. Mr. Goodglass.

332b. THEORIES OF PSYCHOTHERAPY.

Comparison of various theoretical approaches to problems of psychotherapy. Mr. Wiener.

336a. CHILD PSYCHOLOGY IN RELATION TO GENERAL PSYCHOLOGY. Not offered, 1962-63.
Theory and research in child psychology in relation to general psychological theory.
Offered in alternate years. Mr. Wohlwill.

337b. SEMINAR ON PROBLEMS IN CHILD AND DEVELOPMENTAL PSYCHOLOGY.

Not offered, 1962-63.

341. SEMINAR ON CURRENT LITERATURE.

Not offered, 1962-63.

351. CLINICAL METHODS, III.

Integration of various methods in assessment of personality and behavior. Mr. Phillips.

352. CLINICAL METHODS, IV.

Application of theoretical principles to psychotherapy. Mr. Weinreb.

356. PSYCHOPATHOLOGY OF CHILDHOOD.

Not offered, 1962-63.
Mr. Benda.

357. PSYCHOLOGY OF SYMBOLIC BEHAVIOR.

Not offered, 1962-63.
Basic aspects of symbolic behavior; theory, experimental research, ontogenesis, psychopathology of symbol formation. Offered in alternate years. Mr. Werner.

358. PSYCHOLOGY OF LANGUAGE I.

Not offered, 1962-63.
Language theory, ontogenesis of speech and experiments on language behavior. Mr. Werner.

359. PSYCHOLOGY OF LANGUAGE II.

A seminar on comparative psychology of language behavior. In the first semester the relation between language formation and cultural levels will be stressed by drawing on anthropological data. Second semester deals with abnormal psychology of language behavior.

Mr. Werner.

361b. SEMINAR IN PSYCHOLOGICAL REHABILITATION.

Miss Dembo.

362b. PSYCHOLOGICAL PROBLEMS IN GERONTOLOGY.

Not offered, 1962-63.

363a. PROBLEMS IN COMPARATIVE PSYCHOLOGY.

Not offered, 1962-63.

364b. SELECTED PROBLEMS IN PSYCHOPHARMACOLOGY.

Not offered, 1962-63.

Mr. Krus.

365a. PROBLEMS IN THE PSYCHOLOGY OF SMALL GROUPS.

Not offered, 1962-63.

380. RESEARCH IN PSYCHOLOGY.

Direction of individual students in their research.

Staff.

381. READINGS IN PSYCHOLOGY.

Critical analysis of literature in areas related to individual research.

Staff.

385. PARTICIPATION IN PSYCHOLOGICAL CLINIC, I.

Mr. Baker, Miss Switzer.

386. PARTICIPATION IN PSYCHOLOGICAL CLINIC, II.

Mr. Baker, Mr. Lipton.

387. PARTICIPATION IN PSYCHOLOGICAL CLINIC, III.

Mr. Baker, Miss Deweese, Mr. Moriarty, Mr. Pentlarge, Mr. Wiener, Mr. Weinreb.

388. PARTICIPATION IN PSYCHOLOGICAL CLINIC, IV.

Mr. Baker, Miss Deweese, Mr. Moriarty, Mr. Pentlarge, Mr. Wiener, Mr. Weinreb.

390. DEPARTMENTAL COLLOQUIUM.

Visiting Lecturers.

WORKSHOPS

Conducted annually in such areas as comparative-animal psychology, scaling theory, factor analysis, rehabilitation, cultural anthropology.

Visiting Lecturers.

Romance Languages

DEPARTMENT FACULTY

J. Richard Reid, Ph.D., *Professor of Romance Languages, Department Chairman*

Raymond E. Barbera, Ph.D., *Associate Professor of Romance Languages*

J. Fannin King, M.A., *Associate Professor of Romance Languages*

Theodore Nicol, Ph.D., *Associate Professor of Romance Languages*

Mordecai S. Rubin, Ph.D., *Assistant Professor of Romance Languages*

UNDERGRADUATE PROGRAM

The department offers courses in the languages and literatures of France, Spain and Spanish America. These courses fall into two groups: lower level—French and Spanish II

and 12, and upper level—all other Romance language courses.

In the lower level the primary aim is the mastery of the skills of communication in a language, with a view to its effective use for a variety of possible ends. These skills include reading, writing, speaking and understanding as well as what may be called basic literacy in the language.

In the upper level, the primary aim is an acquaintance in depth with a foreign civilization, principally through a study of its literature but with attention also to other aspects of its culture and to the further perfection of linguistic competence. The courses in literature are complemented by others in civilization and in advanced composition, conversation and phonetics.

A major in Romance languages must comprise:

1. Four full courses to be chosen from French 13, 114, 123a, 151a, 152a, 153b and 154b; Spanish 13 and 114; and Romance Languages 124b.
2. French 113 or the equivalent.
3. History 10, or the equivalent, normally to be completed by the end of the sophomore year.
4. At least one course, to be approved by the department, in non-Romance literature.

Students majoring in Romance languages are expected to acquire a thorough knowledge of either French or Spanish and are urged to acquire a competent knowledge of the other, both in language and literature.

Students intending to major in Romance languages should consult the department chairman. An honors program in Romance languages is available to qualified upperclassmen.

LANGUAGE LABORATORY

A modern electronic language laboratory is available for class instruction, independent study and self-appraisal. Use of the laboratory is required of students in the lower level courses in French and Spanish, and available to others. See the section on "Tuition and Other Charges" for the laboratory fee.

DEPARTMENTAL INTERNSHIP PROGRAM

The department cooperates with the Department of Education in a graduate program of preparation of teachers of Romance languages, leading to the degree of Master of Arts in Education. Participants carry appointment as Teaching Assistant Scholars and as Departmental Interns in Romance languages. Normally requiring two years, the program consists of half-time study in education and Romance languages and literatures, and half-time devoted to supervised teaching and other assistance to the Department of Romance Languages.

COURSES IN FRENCH

11. ELEMENTARY.

A course for beginners, including the elements of grammar, pronunciation and conversational patterns, graded readings and the writing of simple French. Three class periods and one to two hours in the language laboratory per week. Laboratory fee. Open to freshmen. Indivisible course.

Staff.

12. INTERMEDIATE.

Review of the elements, and further development of basic literacy and of a balanced mastery of all the communication skills; intensive and extensive reading. An intensive oral approach is used in the classroom. Three class meetings and one to two hours in the language laboratory weekly. Laboratory fee. Prerequisite: French 11 or equivalent skill in the language to be determined by a placement test. Open to freshmen. Indivisible course. Staff.

***13. ORAL AND WRITTEN FRENCH.**

A third-year course. Admission is subject to approval of the instructor in each semester. The normal sequence is 13a during the spring semester of one year followed by 13b the following fall semester. The two parts of the course are organized as follows.

13a. Given in the spring semester.

Not offered, 1962-63.

Analytical study and practice of the elements of communication in French: basic conversation patterns; the sound rhythm and tone patterns of French pronunciation; review of grammatical topics; exercises in written expression. Conducted in French. Prerequisite: Grade of B— or higher in French 12, or equivalent skill in the language to be determined by a placement test. Open to freshmen. Offered in alternate years. Two regular class periods, one two-hour session and one to two hours in the laboratory per week. Laboratory fee.

Mr. King.

13b. Given in the fall semester.

Advanced practice of communication in French. Compositions, oral reports, classroom discussion. Conducted in French. Prerequisite: French 13a, or equivalent skill in the language, to be determined by a placement test. Offered in alternate years. Two regular class periods, one two-hour session and one to two hours in the laboratory per week. Laboratory fee.

Mr. King.

***14. READINGS IN FRENCH LITERATURE.**

A third-year course. The emphasis in the first semester is on reading as communication, with analysis and practice of the techniques of effective reading in French. The emphasis in the second semester is on an understanding of a number of novels and plays selected for their literary excellence and broad appeal. Prerequisite: French 12 or equivalent skill in the language, to be determined by a placement test. Open to freshmen.

Mr. Nicol.

*Courses 13 and 14 are third-year courses within the meaning of the foreign language requirement for the degree of Bachelor of Arts. Course 14 is offered to meet the needs of the general student; course 13 is designed primarily for the student with particular interest and aptitude for language study who intends to take subsequent courses in literature. Both may be taken for credit.

113. INTRODUCTION TO FRENCH CIVILIZATION.

Not offered, 1962-63.

A selective survey of the history, art, literature and music of France, from the Middle Ages to modern times. An elementary knowledge of French is desirable but not required. Admission is subject to the approval of the instructor. May be counted in fulfillment of the general requirement in fine arts but not of the requirement in foreign language. Offered in alternate years.

Mr. Nicol.

114. GENERAL VIEW OF FRENCH LITERATURE.

An interpretation of the main currents of French literature. Each period is studied by concentrating attention on a limited number of works and authors best bringing to focus

the characteristics of the period. Prerequisite: Grade of B— or higher in French 13 or 14, or the equivalent. Mr. King.

123a. ADVANCED LANGUAGE.

Not offered, 1962-63.

Introduction to the problems of stylistics with a study of selected grammatical topics. Conducted in French. Prerequisite: Grade of B— or higher in French 13b, or the equivalent. Offered in alternate years. Mr. Nicol.

*151a. THE MIDDLE AGES AND THE RENAISSANCE.

Not offered, 1962-63.

Emphasis is upon developing an understanding of the philosophical, religious and social attitudes of the Middle Ages and the Renaissance, with due attention to the facts of literary history. Conducted in French. Prerequisite: Grade of B— or higher in French 114, or the equivalent. Offered in alternate years. Mr. King.

*152a. CLASSICISM.

A study of outstanding literary works, drawn principally but not exclusively from the age of Louis XIV, to illustrate the esthetic and intellectual nature of the classical point of view as it persists in the French thought of various periods. Conducted in French. Prerequisite: Grade of B— or higher in French 114, or the equivalent. Offered in alternate years. Mr. Nicol.

*153b. ROMANTICISM AND REALISM.

A study of outstanding literary works, drawn principally but not exclusively from the late 18th and 19th centuries, to illustrate the esthetic and intellectual climates and the literary techniques generally described as romantic or realistic. Conducted in French. Prerequisite: Grade of B— or higher in French 114, or the equivalent. Offered in alternate years. Mr. Nicol.

*154b. THE MODERN PERIOD.

Not offered, 1962-63.

A study of a few outstanding dramatists, novelists and poets to illustrate the highly varied literary attitudes characteristic of 20th century French literature. Conducted in French. Prerequisite: Grade of B— or higher in French 114, or the equivalent. Offered in alternate years. Mr. Nicol.

*For French 151a, 152a, 153b and 154b a certain historical and analytical perspective such as is provided by French 114 is presupposed. These courses are planned so that they need not be taken in chronological order but may be taken at the student's convenience. Attention is given to the social forces and movements underlying the attitudes whose literary manifestations are under study.

ROMANCE LANGUAGES 124b. COMPARATIVE FRENCH AND SPANISH PHONETICS.

The elements of general phonetics. A detailed study of the pronunciation of French and Spanish. Prerequisites: Grade of B— or higher in French 13a or Spanish 13; elementary knowledge of the other language. Advised for majors who plan to teach either language. Offered at the discretion of the department. Mr. Reid.

ROMANCE LANGUAGES 270 (Education 270). THE TEACHING OF ROMANCE LANGUAGES.

For complete description, see Education 270.

Mr. Reid and Staff.

COURSES IN SPANISH

11. ELEMENTARY.

A course for beginners, including the elements of grammar, pronunciation and conversational patterns, graded readings and the writing of simple Spanish. Three class periods and one to two hours in the language laboratory per week. Laboratory fee. Open to freshmen. Indivisible course. Staff.

12. INTERMEDIATE.

A review of the elements and further development of basic literacy and of a balanced mastery of all the communication skills; intensive and extensive reading of texts dealing with Spain and Spanish America. An intensive oral approach is used in the classroom. Three class periods and one or two hours in the language laboratory per week. Laboratory fee. Prerequisite: Spanish 11 or equivalent skill in the language, to be determined by a placement test. Open to freshmen. Indivisible course. Staff.

*13. ORAL AND WRITTEN SPANISH.

A third-year course. A rapid intensive review of grammar; the elements of phonetics; exercises in composition and pronunciation; conversational practice. Conducted in Spanish. Admission is subject to the approval of the instructor. Prerequisite: Grade of B— or higher in Spanish 12, or equivalent skill in the language, to be determined by a placement test. Open to freshmen. Offered in alternate years. Two regular class periods, one two-hour session, and one to two hours in the laboratory per week. Laboratory fee.

Mr. Barbera.

*14. READINGS IN SPANISH AND SPANISH-AMERICAN LITERATURE.

A third-year course. The first semester is devoted to Spanish-American literature; the second semester to Spanish works. The emphasis in the first semester is on reading as communication, with analysis and practice of the techniques of effective reading in Spanish. The emphasis in the second semester is on the understanding of a number of major works of the literature of Spain. Prerequisite: Spanish 12 or the equivalent skill in the language, to be determined by a placement test. Open to freshmen.

Mr. Reid.

*Courses 13 and 14 are third-year courses within the meaning of the foreign language requirement for the degree of Bachelor of Arts. Course 14 is offered to meet the needs of the general student; course 13 is designed primarily for the student with particular interest and aptitude for language study who intends to take subsequent courses in literature. Both may be taken for credit.

114. THE LITERATURE OF SPAIN.

Not offered, 1962-63.

A general view of Spanish literature with emphasis on the origins and development of the novel and drama, culminating in the masterworks of the 19th century. Attention is given to political and cultural background. Prerequisite: Grade of B— or higher in Spanish 13 or 14, or the equivalent. Offered in alternate years.

Mr. Barbera.

ROMANCE LANGUAGES 124b. COMPARATIVE FRENCH AND SPANISH PHONETICS.

For complete description, see Romance Languages 124b under "Courses in French."

Mr. Reid.

ROMANCE LANGUAGES 270 (Education 270). THE TEACHING OF ROMANCE LANGUAGES.

For complete description, see Education 270.

Mr. Reid and Staff.



DIRECTORIES

The Faculty

Members of the faculty and officers of instruction for 1962-63 are listed alphabetically with their titles, degrees and years at Clark University. Persons no longer on the faculty but who served during the previous year are included. The President and emeriti are listed first.

President

HOWARD BONAR JEFFERSON, Ph.D., LL.D., L.H.D., Litt.D., President. A.B., Denison University, 1923; Ph.D., Yale University, 1929; LL.D., Denison University, 1948, Hillsdale College, 1952, Northwestern University, 1958; L.H.D., Colgate University, 1951, Assumption College, 1956; Litt.D., College of the Holy Cross, 1962. (1946-)

Emeriti

LEROY ALLSTON AMES, A.M., Professor of English Literature, Emeritus. (1908-44)
 SAMUEL J. BRANDENBURG, Ph.D., Professor of Economics and Sociology, Emeritus. (1923-50)
 JESSE LUNT BULLOCK, Ph.D., Professor of Chemistry, Emeritus. (1926-59)
 LORING HOLMES DODD, Ph.D., L.H.D., Professor of English and Art, Emeritus. (1910-49)
 ROBERT STANLEY ILLINGWORTH, A.M., Ed.M., Professor of Speech and Drama, Emeritus. (1931-58)
 HOMER PAYSON LITTLE, Ph.D., LL.D., Dean of the College and Professor of Geology, Emeritus. (1922-54)
 CAREY EYSTER MELVILLE, A.B., Professor of Mathematics, Emeritus. (1909-48)
 DAVID POTTER, Ph.D., Professor of Biology, Emeritus. (1924-59)
 PERCY MARTIN ROOPE, Ph.D., Professor of Physics, Emeritus. (1921-62)
 SAMUEL VAN VALKENBURG, Ph.D., Professor of Geography, Emeritus. (1926-29, 1932-62)
 HEINZ WERNER, Ph.D., Professor of Psychology, Emeritus. (1947-60); Chairman, Board of Directors, Institute of Human Development. (1961-)

Faculty and Officers of Instruction

MERRITT GOLD ABRASH, Ph.D., Assistant Professor of History. B.A., Washington and Lee University, 1951; M.I.A., Columbia University, 1958; Ph.D., 1961. (1960-62)
 VERNON AHMADJIAN, Ph.D., Assistant Professor of Botany. A.B., Clark University, 1952; A.M., 1956; Ph.D., Harvard University, 1960. (1959-)
 KARL OSCAR EMANUEL ANDERSON, Ph.D., Professor of English. A.B., Harvard University, 1927; A.M., 1928; Ph.D., 1942. (1945-)
 ROY STUART ANDERSON, Ph.D., Professor of Physics. A.B., Clark University, 1943; A.M., Dartmouth College, 1948; Ph.D., Duke University, 1951. (1960-)
 KARL JOHN RICHARD ARNDT, Ph.D., Professor of German. A.M., Washington University, 1928; Ph.D., The Johns Hopkins University, 1933. (1950-)
 ROBERT WILLIAM BAKER, Ph.D., Associate Professor of Psychology. A.B., Hobart College, 1947; Ph.D., Clark University, 1953. (1954-)

- GEORGE ANTHONY BALKO, JR., M.B.A., Assistant Professor of Business Administration. M.E., Stevens Institute of Technology, 1947; M.B.A., New York University, 1952. (1956-)
- FREDERICK EMERSON BAMFORD, M.B.A., Assistant Professor of Economics and Business Administration. B.Mus., Boston University, 1954; B.S. in B.A., 1954; M.B.A., 1955. (1961-)
- RAYMOND EDMOND BARBERA, Ph.D., Associate Professor of Romance Languages. A.B., Brooklyn College, 1947; A.M., University of Arizona, 1948; Doctor en Letras, Universidad Nacional de Mexico, 1949; Ph.D., University of Wisconsin, 1958. (1953-)
- CLAUDE WILLIS BARLOW, Ph.D., Professor of Classics. A.B., Amherst College, 1928; A.M., Indiana University, 1930; Ph.D., Yale University, 1935. (1947-)
- TILTON MARSHALL BARRON, B.L.S., Librarian. A.B., Colorado College, 1937; B.L.S., Columbia University School of Library Service, 1940. (1954-)
- JAMES FRANKLIN BEARD, JR., Ph.D., Professor of English. A.B., Columbia College, 1940; A.M., Columbia University, 1941; Ph.D., Princeton University, 1949. (1955-)
- ROBERT NELSON BECK, Ph.D., Professor of Philosophy. A.B., Clark University, 1947; A.M., Boston University, 1948; Ph.D., 1950. (1948-)
- CLEMENS E. BENDA, M.D., Associate Professor (affiliate) of Psychology. M.D., University of Berlin, 1922. (1958-)
- BRUCE A. BEVELHEIMER, M.A., Instructor in Mathematics. A.B., University of Michigan, 1956; A.M., 1957. (1960-62)
- ROGER BIBACE, Ph.D., Assistant Professor (affiliate) of Clinical Psychology. A.B., University of British Columbia, 1949; Ph.D., Clark University, 1957. (1957-)
- GEORGE ATHAN BILLIAS, Ph.D., Associate Professor of American History. A.B., Bates College, 1948; A.M., Columbia University, 1949; Ph.D., 1958. (1962-)
- JACK WILLIAM BIRCH, Ph.D., Professor of Geography. A.B., University of Reading, 1949; Ph.D., 1957. (1960-)
- CHARLES S. BLINDERMAN, Ph.D., Associate Professor of English. A.B., New York University, 1952; A.M., 1953; Ph.D., University of Indiana, 1957. (1962-)
- DANIEL R. BORG, A.M., Instructor in History. A.B., Gustavus Adolphus College, 1953; A.M., Yale University, 1957. (1961-)
- HENRY CHARLES BORGER, JR., Ph.D., Professor of Education, Dean of Students. A.B., Princeton University, 1933; A.M., Columbia University, 1938; Ph.D., 1954. (1950-)
- WESLEY E. BRYERS, A.B., Instructor in Geology. A.B., Rutgers University, 1956. (1961-)
- GUY HARVEY BURNHAM, A.M., Instructor in Geography and Cartographer, Graduate School of Geography. A.B., Clark University, 1916; A.M., 1922. (1922-)
- GEORGE CAMOUGIS, Ph.D., Associate Professor of Physiology. B.S., Tufts College, 1952; A.M., Harvard University, 1957; Ph.D., 1958. (1958-)
- ROBERT FRANCIS CAMPBELL, Ph.D., Professor of American History, Dean of the College. A.B., Yale University, 1939; A.M., Columbia University, 1940; Ph.D., 1947. (1946-57; 1960-)
- ERNEST CAPSTACK, JR., Ph.D., Visiting Assistant Professor of Chemistry. B.S., Massachusetts Institute of Technology, 1952; M.A., University of Rhode Island, 1954; Ph.D., Brown University, 1959. (1962-)

- WILLIAM HOYT CARTER, JR., Ph.D., Associate Professor of English. A.B., Middlebury College, 1936; A.M., Harvard University, 1938; Ph.D., 1951. (1949-)
- JAMES MADISON COFFEE, Ed.D., Associate Professor of Education. A.B., Duke University, 1949; A.M., Cornell University, 1950; Ed.D., Harvard University, 1957. (1954-)
- MORRIS HAROLD COHEN, Ph.D., Associate Professor of Government. A.B., University of Chicago, 1939; Ph.D., 1950. (1947-)
- LYDIA PERRY COLBY, Registrar. (1932-)
- SAMUEL PENDLETON COWARDIN, III, A.M., Assistant Professor of Fine Arts. A.B., Harvard University, 1943; A.M., 1948. (1949-)
- WALTER HOBSON CROCKETT, Ph.D., Associate Professor of Psychology. A.B., University of Kansas, 1947; A.M., 1949; Ph.D., University of Michigan, 1953. (1957-)
- JESSIE CAMPBELL CUNNINGHAM, A.M., Assistant Professor of English. Ph.B., University of Chicago, 1948; A.M., 1952. (1957-)
- TAMARA DEMBO, Ph.D., Professor of Psychology. Ph.D., University of Berlin, 1930. (1953-)
- THOMAS JOSEPH DOLPHIN, A.B., Director of The Evening College, Director of the Summer School. A.B., Rutgers University, 1951. (1957-)
- RALPH I. DORFMAN, Ph.D., Professor (affiliate) of Chemistry. B.S., University of Illinois, 1932; Ph.D., University of Chicago, 1934. (1955-)
- JAMES STANHOPE EDWARDS, A.M., Associate Professor of German. A.B., Brown University, 1936; A.M., 1938. (1947-)
- HENRY FRANDSEN, Ph.D., Assistant Professor of Mathematics. B.S., University of Illinois, 1957; M.S., 1959; Ph.D., 1961. (1961-)
- MINORU FUJIMOTO, Ph.D., Assistant Professor of Physics. B.S., Osaka University, 1955; Ph.D., University of Southampton, 1959. (1961-)
- BURTON N. GATES, Ph.D., Research Associate in Botany. A.B., Clark University, 1905; A.M., 1906; Ph.D., 1909. (1954-)
- KATHARINE BLAIR GATES, Ph.D., Instructor in English. A.B., Vassar College, 1953; Ph.D., Radcliffe College, 1961. (1961-62)
- ROBERT GOLDHAMMER, Ed.M., Assistant Professor of Education. A.B., University of Chicago, 1956; Ed.M., Harvard University, 1957.
- HAROLD GOODGLASS, Ph.D., Lecturer in Psychology. A.B., College of the City of New York, 1939; A.M., New York University, 1948; Ph.D., University of Cincinnati, 1951. (1956-)
- DANIEL GORENSTEIN, Ph.D., Professor of Mathematics. A.B., Harvard University, 1943; Ph.D., 1950. (1951-)
- ROCHELEAU ZEPHIRIN GRANGER, JR., A.M. in Ed., Director of Physical Education for Men. A.B., Clark University, 1938; A.M. in Ed., 1939. (1949-)
- SANTE GRAZIANI, M.F.A., Associate Professor (affiliate) of Fine Arts. B.F.A., Yale University, 1942; M.F.A., 1948. (1958-)
- WARREN D. GIBBONS, Ed.D., Assistant Professor of Education. A.B., Boston University, 1955; Ed.M., Harvard University, 1956; Ed.D., 1959. (1959-62)
- GERALD N. GROB, Ph.D., Associate Professor of American History. B.S., College of the City of New York, 1951; A.M., Columbia University, 1952; Ph.D., Northwestern University, 1958. (1957-)

- GORDON T. GWINN, Ph.D., Associate Professor of Psychology. A.B., University of Arizona, 1942; Ph.D., Yale University, 1948. (1949-)
- GEORGE EDWARD HARGEST, M.B.A., Associate Professor of Economics and Business Administration. B.S., Temple University, 1933; M.Ed., 1937; M.B.A., Boston University, 1947. (1942-)
- M. EVELYN HARRIMAN, M.A. in Ed., Lecturer in Education. B.S. in Ed., Boston University, 1948; M.A. in Ed., 1950. (1956-)
- EDWARD H. HASTINGS, A.M., Instructor in English. A.B., Wesleyan University, 1946; A.M., Harvard University, 1947. (1950-52; 60-62)
- SEYMOUR HAYDEN, A.M., Assistant Professor of Mathematics. A.B., University of Wisconsin, 1947; A.M., Harvard University, 1948. (1957-)
- SHERMAN STRONG HAYDEN, Ph.D., Professor of International Relations. A.B., Harvard University, 1930; LL.B., 1933; A.M., Columbia University, 1936; Ph.D., 1942. (1946-)
- EARL E. HAYS, Ph.D., Associate Professor (affiliate) of Physics. A.B., Allegheny College, 1940; Ph.D., Northwestern University, 1949. (1961-)
- SERENA SUE HILSINGER, A.B., Lecturer in English. A.B., Douglass College, 1959. (1962-)
- M. HAZEL HUGHES, M.Ed., Dean of Women, Director of Physical Education for Women. B.Ed., Clark University, 1944; M.Ed., Boston University, 1949. (1942-)
- ROBERT MOOERS HYDE, A.M., Executive Vice President. A.B., Rutgers University, 1947; A.M., University of Pennsylvania, 1949. (1954-)
- VERNON JONES, Ph.D., Professor of Educational Psychology. B.A., University of Virginia, 1920; M.A., 1920; M.A., Columbia University, 1924; Ph.D., 1926. (1926-)
- HENRY DONALDSON JORDAN, Ph.D., Professor of English History. A.B., Harvard University, 1918; A.M., 1922; Ph.D., 1925. (1931-)
- OTTO F. KALMAN, Ph.D., Assistant Professor of Chemistry. B.S. in Ch.E., Purdue University, 1955; M.A., Princeton University, 1958; Ph.D., 1959. (1961-62)
- BERNARD KAPLAN, Ph.D., Associate Professor of Psychology. A.B., Brooklyn College, 1948; A.M., Clark University, 1950; Ph.D., 1953. (1955-)
- ROBERT KASTENBAUM, Ph.D., Lecturer in Psychology. B.A., Long Beach State College, 1954; Ph.D., University of Southern California, 1959. (1959-)
- ROBERT W. KATES, Ph.D., Assistant Professor of Geography. A.M., University of Chicago, 1960; Ph.D., 1962.
- GERSON KEGELES, Ph.D., Professor of Chemistry. B.S., Yale University, 1937; Ph.D., 1940. (1951-)
- FREDERICK W. KILLIAN, LL.B., Associate Professor of Sociology. LL.B., New York University, 1925; A.B., 1934. (1947-)
- JESSE FANNIN KING, A.M., Associate Professor of Romance Languages. A.B., Pomona College, 1936; A.M., Harvard University, 1937. (1946-)
- WERNER KOELLA, M.D., Lecturer in Psychology. M.D., University of Zurich, 1942. (1958-)
- ROGER P. KOHIN, Ph.D., Assistant Professor of Physics. B.Sc., Notre Dame University, 1953; Ph.D., University of Maryland, 1961. (1962-)

- DONALD MAX KRUS, Ph.D., Associate Professor of Psychology. B.A., Drew University, 1949; A.M., Clark University, 1951; Ph.D., 1957. (1958-)
- DWIGHT ERWIN LEE, Ph.D., Professor of Modern European History, Dean of the Graduate School. A.B., University of Rochester, 1921; A.M., 1922; Ph.D., Harvard University, 1928. (1927-)
- THEODORE LEVENTHAL, Ph.D., Assistant Professor (affiliate) of Psychology. A.B., Brooklyn College, 1948; Ph.D., University of Kansas, 1953. (1955-)
- JESSIE L. LIGHTNER, M.A., Lecturer in English. A.B., University of Chicago, 1956; M.A., Brandeis University, 1959. (1962-)
- HERBERT LIPTON, Ph.D., Assistant Professor (affiliate) of Psychology. A.B., Rutgers University, 1949; A.M., Clark University, 1951; Ph.D., 1954. (1956-)
- CURTIS MARCHANT, M.A., Assistant Professor of Romance Languages. B.A., University of California, 1947; M.A., 1949. (1959-62)
- JAMES ACKLEY MAXWELL, Ph.D., Professor of Economics. A.B., Dalhousie University, 1921; A.M., Harvard University, 1923; Ph.D., 1927. (1924-)
- JOSEPH H. MCFARLAND, Ph.D., Assistant Professor (affiliate) of Psychology. A.B., Brandeis University, 1955; A.M., Clark University, 1957; Ph.D., 1960. (1961-)
- FREDERICK EUGENE MELDER, Ph.D., Professor of Economics. B.B.A., University of Washington, 1926; M.A., 1931; Ph.D., University of Wisconsin, 1936. (1937-46; 1950-)
- GEORGE HENRY MERRIAM, Ph.D., Lecturer in American History, Director of Admissions. A.B., Clark University, 1944; A.M., Brown University, 1947; Ph.D., Clark University, 1961. (1952-)
- DAVID MORIARTY, M.D., Professor (affiliate) of Clinical Psychology. M.D., Boston University, 1947. (1960-)
- JOHN HUBERT MULLER, Ph.D., Associate Professor of Physics. A.B., Princeton University, 1949; M.S., Michigan State University, 1954; Ph.D., 1958. (1962-)
- RAYMOND EDWARD MURPHY, Ph.D., Professor of Economic Geography. B.S., Missouri School of Mines and Metallurgy, 1923; M.S., University of Wisconsin, 1926; Ph.D., 1930. (1946-)
- KAZUO NAKAMOTO, D.Sc., Assistant Professor of Chemistry. B.S., Osaka University, Japan, 1945; D.Sc., 1953. (1959-61)
- HERBERT J. NERJES, A.M., Assistant Professor of German. A.B., Brown University, 1957; A.M., Yale University, 1958. (1961-)
- WILLIAM R. NES, Ph.D., Associate Professor of Biochemistry. B.A., University of Oklahoma, 1946; M.S., University of Virginia, 1948; Ph.D., 1950. (1958-)
- HOWARD WHITE NICHOLSON, Ph.D., Associate Professor of Economics. B.A., Oberlin College, 1942; A.M., Harvard University, 1948; Ph.D., 1950. (1958-)
- THEODORE NICOL, Ph.D., Associate Professor of Romance Languages. A.B., Clark University, 1926; A.M., Harvard University, 1928; Ph.D., 1933. (1946-)
- RUDOLPH FINK NUNNEMACHER, Ph.D., Professor of Zoology. B.S., Kenyon College, 1934; A.M., Harvard University, 1935; Ph.D., 1938. (1939-)
- PHILIP GILBERT OLSON, Ph.D., Assistant Professor of Sociology. A.B., University of Arizona, 1954; A.M., 1956; Ph.D., Purdue University, 1959. (1961-)
- LESLIE PHILLIPS, Ph.D., Professor (affiliate) of Clinical Psychology. A.M., University of Chicago, 1944; Ph.D., 1949. (1946-)

- RELLY RAFFMAN, A.M., Associate Professor of Music. A.B., Dartmouth College, 1943; A.M., Columbia University, 1949. (1954-)
- J. RICHARD REID, Ph.D., Professor of Romance Languages. A.B., Swarthmore College, 1935; A.M., Harvard University, 1936; Ph.D., 1943. (1944-)
- JOHN THEODORE REYNOLDS, Ph.D., Associate Professor of Microbiology. B.S., Boston College, 1951; M.S., University of Massachusetts, 1954; Ph.D., 1962. (1956-)
- HARRIS ROSENKRANTZ, Ph.D., Associate Professor (affiliate) of Biology. A.B., Brooklyn College, 1943; M.S., New York University, 1946; M.S., Cornell Medical College, 1948; Ph.D., Tufts Medical School, 1952. (1959-)
- MORDECAI S. RUBIN, Ph.D., Assistant Professor of Romance Languages. A.B., Rutgers University, 1952; Ph.D., University of Maryland, 1961. (1962-)
- NEIL ROLF SCHROEDER, Ph.D., Assistant Professor of English. A.B., Brown University, 1952; Ph.D., Yale University, 1962. (1960-)
- ARTHUR JOSEPH SERRA, B.S., Assistant in Physical Education. B.S., Springfield College, 1956. (1960-)
- DAYTON D. SHEPHERD, A.M., Lecturer in Education. B.S., Southwest Missouri State College, 1946; A.M., Yale University, 1950. (1954-)
- EUGENIA S. SHERE, Ph.D., Research Associate in Psychology. Ph.D., University of Jena. (1957-62)
- CLIFFORD K. SHIPTON, Ph.D., Professor (affiliate) of American History. B.S., Harvard University, 1926; A.M., 1927; Ph.D., 1933. (1961-)
- RODMAN ELDREDGE SNEAD, A.M., Assistant Professor of Geography. B.A., University of Virginia, 1953; A.M., Syracuse University, 1955. (1961-)
- ROBERT JOHN STAIRS, B.S., Assistant in Physical Education. B.S., University of Rhode Island, 1956. (1959-)
- JOHN SUNAPEE STUBBE, Ph.D., Associate Professor of Mathematics. B.S., University of New Hampshire, 1941; M.S., Brown University, 1942; Ph.D., University of Cincinnati, 1945. (1949-)
- THOMAS TAMOTSU SUGIHARA, Ph.D., Professor of Chemistry. A.B., Kalamazoo College, 1945; S.M., University of Chicago, 1951; Ph.D., 1952. (1953-)
- STANLEY SULTAN, Ph.D., Associate Professor of English. A.B., Cornell University, 1949; A.M., Boston University, 1950; Ph.D., Yale University, 1955. (1959-)
- EDWARD N. TRACHTENBERG, Ph.D., Associate Professor of Chemistry. A.B., New York University; A.M., Harvard University, 1951; Ph.D., 1953. (1958-)
- ARNOLD TREHUB, Ph.D., Lecturer in Psychology. A.B., Northeastern University, 1949; A.M., Boston University, 1951; Ph.D., 1954. (1958-61)
- ALDO P. TRUANT, Ph.D., Associate Professor (affiliate) of Biology. A.B., University of Western Ontario, 1944; Ph.D., Yale University, 1949. (1959-)
- ROGER CARLETON VAN TASSEL, Ph.D., Associate Professor of Economics. A.B., Union College, 1947; A.M., Cornell University, 1950; Ph.D., Brown University, 1956. (1954-)
- ANTHONY VARJABEDIAN, M.D., Lecturer in Psychology. A.B., Clark University, 1941; M.D., Yale University, 1944. (1954-)

- SEYMOUR WAPNER, Ph.D., Professor of Psychology. A.B., New York University, 1939; A.M., University of Michigan, 1940; Ph.D., 1943. (1948-)
- HENRY JOHN WARMAN, Ph.D., Professor of Geography. B.S. in Ed., Bloomsburg State Teachers College, 1932; Ed.M., Temple University, 1938; Ph.D., Clark University, 1945. (1943-)
- JOSEPH WEINREB, M.D., Professor (affiliate) of Psychology. A.B., Vanderbilt University, 1931; M.D., 1935. (1947-)
- WEN-YANG WEN, Ph.D., Assistant Professor of Chemistry. Ph.D., University of Pittsburgh, 1958. (1962-)
- JEFFERSON A. WHITE, A.M., Assistant Professor of Philosophy. B.A., Baylor University, 1952; B.D., Yale University, 1957; A.M., Yale University, 1960. (1961-)
- MORTON WIENER, Ph.D., Associate Professor of Psychology, Director of Clinical Psychology Training Program. B.S., College of the City of New York, 1949; M.S., 1950; Ph.D., University of Rochester, 1953. (1957-)
- JOACHIM F. WOHLWILL, Ph.D., Associate Professor of Psychology. A.B., Harvard College, 1949; Ph.D., University of California, 1957. (1958-)
- PETER H. WOLFF, M.D., Lecturer in Psychology. M.D., University of Chicago, 1950. (1961-)
- ALLAN M. ZWICKEL, Ph.D., Assistant Professor of Chemistry. A.B., Cornell University, 1956; Ph.D., University of Chicago, 1959. (1961-)

Academic Boards and Committees, 1961-62

The President and Executive Vice President are *ex officio* members of all boards and committees.

Committee on Personnel and Organization: President (chairman), Dean of the College, Dean of the Graduate School, Reid (vice chairman and secretary), Gorenstein, Jordan (on leave second semester 1961-62), Maxwell, Wapner.

Administrative Committee: Dean of the College (chairman), Dean of Students, Dean of Women, Director of Admissions, Assistant Treasurer.

Graduate Board: President (chairman), Dean of the Graduate School, Coffee, Gorenstein, Gwinn, Sherman Hayden, Jones, Kegeles, Maxwell, Melder, Murphy, Nunnemacher, Roope, Sugihara, Trachtenberg, Van Valkenburg, Wapner, Warman.

Credentials Committee: Dean of the Graduate School (chairman), Jones, Sherman Hayden, Kegeles, Maxwell, Nunnemacher, Van Valkenburg, Wapner.

Committee on Proficiency in Foreign Languages: Arndt, Reid, representative of student's major department.

Academic Council: Dean of the College (chairman), Beard, Beck, Nunnemacher, Reid, Roope, Wapner.

College Board: Dean of Students (chairman), Dean of the College, Dean of Women, Ahmadjian, Coffee, Edwards, Jordan (on leave second semester 1961-62), Nicholson (second semester 1961-62).

Committee on Admissions: Director of Admissions (chairman), Dean of the College, Dean of Students, Dean of Women, Barlow, Cunningham, Sherman Hayden, Nicol, Reynolds, Roche.

Committee on Athletics: Warman (chairman), Dean of Students, Granger, Hughes, Maxwell, Stubbe.

Committee on Scholarships: Sherman Hayden (chairman), Dean of the College, Dean of Students, Barron, Director of Admissions, Financial Aid Officer, Van Tassel.

Library Committee: K. Anderson (chairman), Ahmadjian, Grob.

Appointments from Graduate Funds, 1961-62

Alumni Association Fellow

Stephen C. Kwan, Chemistry. B.S., Northwestern University, 1953.

George S. Barton Scholars

Mary J. Murray, History. A.B., Clark University, 1961.

Marcia Savage, Education. A.B., Clark University, 1961.

Eliza D. Dodge Scholar

Bernard Goldsmith, History. A.B., University of Michigan, 1949.

Joseph F. Donnelly Fellows

Leonard W. Bowden, Geography. A.B., University of Colorado, 1954; M.A., 1961.

Bruce Denner, Psychology. B.A., College of the City of New York, 1960.

Robert Gardula, Geography. B.S.Ed., Bridgewater State College, 1960.

James C. Loughlin, Economics. B.S., Fordham University, 1959; M.A., Clark University, 1961.

Albert Mehrabian, Psychology. B.Sc., Massachusetts Institute of Technology, 1961; M.Sc., 1961.

Llewellyn M. Mullings, Economics. A.B., Atlantic Union College, 1960.

Austin S. Garver Scholars and Fellows

Nicholas Barriss, Geography. Teacher's Diploma from Eotvos Lorand University of Science (Budapest), 1951.

Anna Wirtz Guyette, Psychology. A.B., University of New Hampshire, 1959; M.A., 1961.

Annette Pinckney, Economics. A.B., Fisk University, 1958; M.A., Clark University, 1960.

Jae-Choong Woo, History. A.B., Kook-Min College, 1959.

Charles H. Thurber Scholar

John Santosuosso, History. A.B., Ursinus College, 1961.

Teaching Assistants and Teaching Assistant Scholars, 1961-62

- Almasian, Rosalie, Chemistry. A.B., Clark University, 1961.
- Baba, Hiroshi (Sem. I), Chemistry. B.S., Tokyo University, 1958.
- Bauermeister, Martin, Psychology. Pre-med. Certificate, University of Frankfurt, 1955; Diploma in Psychology, 1960.
- Becker, Leonard, Sociology. A.B., Cornell University, 1960.
- Brent, Sandor B., Psychology. A.B., Washington University, 1954.
- Brugman, Carol M., Education. A.B., Emmanuel College, 1958.
- Butters, Nelson M., Psychology. A.B., Boston University, 1960.
- Canner, Stephen J., Accounting. A.B., Northeastern University, 1959; A.M., Clark University, 1961.
- Chandler, Mrs. Harriette L. (Sem. I), History, Government & International Relations. A.B., Wellesley College, 1959.
- Christopher, Peter R., Mathematics. A.B., Clark University, 1959.
- Cobb, Mrs. Barbara D. (Sem. II), History, Government & International Relations. A.B., Wellesley College, 1933; A.M., Tufts University, 1934.
- Cramton, Thomas J., Mathematics. A.B., Harvard College, 1960.
- Denner, Bruce, Psychology. B.S., College of the City of New York, 1960; A.M., Clark University, 1961.
- Doring, George P., Education. A.B., Brandeis University, 1961.
- Ede, Elwood K., Mathematics. A.B., Clark University, 1960.
- Farrell, Marcus J., Biology. A.B., St. Anslem's College, 1960.
- Glick, Joseph A., Psychology. A.B., Brandeis University, 1957; A.M., Clark University, 1959.
- Guyette, Mrs. Anna M., Psychology. A.B., University of New Hampshire, 1959; A.M., 1961.
- Husain, Mrs. Razia (Sem. II), Biology. I.Sc., Eden College (Dacca), 1956; B.Sc., Dacca University, 1958; M.Sc., 1960.
- Iatrides, John O., History. A.B., Ohio Wesleyan, 1953; A.M., University of Michigan, 1954.
- James, Herbert I., Chemistry. B.S., Hampton Institute, 1955; A.M., Clark University, 1958.
- Kempler, Bernhard, Psychology. A.B., Brandeis University, 1958.
- Klein, Stanley, Psychology. A.B., Lehigh University, 1957; A.M., Clark University, 1958.
- Kumar, Santosh, Physics. M.Sc., University of Gorokhpur, 1961.
- Kwan, Stephen (Sem. II), Chemistry. B.S., Northwestern University, 1953.
- Langer, Jonas, Psychology. A.B., College of the City of New York, 1957; A.M., Clark University, 1959.
- Lee, Bonghoon, Chemistry. B.S., Korea University College of Liberal Arts and Sciences, 1958.
- Lee, Shiu-Chun, Biology. B.S., Taiwan Normal University, 1958.
- Lonnroth, Nancy, Education. A.B., Clark University, 1961.
- Lou, Mrs. Ru-Shuoh, Biology. B.Sc., Taiwan Normal University, 1959.
- Loughlin, James C., Economics. B.S., Fordham University, 1959; A.M., Clark University, 1961.

- Mach, Martin H., Chemistry. B.S., College of the City of New York, 1961.
- Mahadevan, Jayaraman, Physics. B.Sc., Madras University, 1951.
- Mercille, Jean-Marie, Chemistry. B.Sc., University of Montreal, 1956.
- Nadeau, Paul, Physics. B.S.Ed., Bridgewater State College, 1961.
- Overton, Willis F., Jr., Psychology. A.B., Boston University, 1960; A.M., 1961.
- Rand, George, Psychology. B.S., College of the City of New York, 1959; A.M., Clark University, 1961.
- Sia, Cho-lu (Sem. II), Chemistry. B.S., Mapua Institute of Technology, 1957.
- Stayton, Samuel, Psychology. A.B., University of Kansas, 1956; A.M., Clark University, 1958.
- Sziklai, Csaba, Psychology. University of Law & Political Science (Hungary), 1957; A.M., Clark University, 1958.
- Teft, Leon, Psychology. A.B., University of Bridgeport, 1961.
- To, Chuen-Mo, Biology. B.Sc., Taiwan Normal University, 1959.
- Wheaton, Donald, Economics. B.S. in B.A., Northeastern University, 1959.
- Williams, Elizabeth, Psychology. A.B., Mount Holyoke College, 1954.
- Yamashiro, Jennie Nell, Education. A.B., Atlantic Union College, 1960.
- Yang, Szu-I (Sem. I), Chemistry. B.S., Taiwan Normal University, 1956.

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Summary of Enrollment for 1961-62

	First Semester			Second Semester		
	Men	Women	Total	Men	Women	Total
Undergraduates						
Freshmen	162	92	254	158	91	249
Sophomores	178	87	265	168	84	252
Juniors	146	71	217	134	66	200
Seniors	112	66	178	110	63	173
TOTAL	598	316	914	570	304	874
Graduate Students	143	58	201	142	65	207
Special Students	21	11	32	10	9	19
TOTALS	762	385	1147	722	378	1100
Evening College*	545	295	840	504	244	748
Total Students	1307	680	1987	1226	622	1848
Less duplications	37	25	62	84	35	119
Net Totals	1270	655	1925	1142	587	1729

Summer School—1961: 461

*Does not include those enrolled for non-credit courses.

SUMMARY OF DEGREES IN 1962

DEGREES IN COURSE

BACHELOR OF ARTS	150
BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION	25
BACHELOR OF SCIENCE IN BUS. ADM. (EVENING COLL.)	16
BACHELOR OF SCIENCE IN GEN. STUDIES (EVE. COLL.)	11

DEGREES IN COURSE

MASTER OF ARTS	31
MASTER OF ARTS IN EDUC.	18
DOCTOR OF PHILOSOPHY	19
<u>HONORARY DEGREES</u>	
DOCTOR OF LAWS	2
DOCTOR OF SCIENCE	2

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CLARK UNIVERSITY

SEVENTY-SECOND

ANNUAL COMMENCEMENT

WORCESTER MEMORIAL AUDITORIUM

SUNDAY, JUNE 10, 1962

WORCESTER, MASSACHUSETTS



ORDER OF EXERCISES

Prelude

Now Thank We All Our God

J. S. Bach

Rhosymedre

Vaughan Williams

Processional

Pomp and Circumstance

Edward Elgar

Invocation

THE REVEREND DR. ROBERT S. ILLINGWORTH, A.B., '17
*Minister, Barre Congregational Church
Barre, Massachusetts*

Welcome by the President

DR. HOWARD B. JEFFERSON

Commencement Address

DR. HUDSON HOAGLAND
*Executive Director
Worcester Foundation for
Experimental Biology
Shrewsbury, Massachusetts*

Conferring of Degrees

Alma Mater

Fiat Lux (Stanzas I and III)

The Benediction

THE REVEREND DR. ILLINGWORTH

Recessional

Rigaudon

André Campra

Organist: Henry Hokans

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Words by

E. L. Clarke, '09

Music by

R. F. Fletcher, '10

Oh Clark! Thy sons have gathered
To thee from east and west,
To pledge with deep devotion
The college they love best.
They love thy halls and campus,
Each comrade of their heart
The memories, aims, traditions
That make thee what thou art.

Hail Clark! We who revere thee
Salute thee with a cheer!
While we shall live we'll praise thee.
Oh college without peer!
Only with life shall perish
Thy name and memory bright,
Thy sons shall ever cherish
The scarlet and the white!

Godspeed our Alma Mater,
And may she ever be
The leader of the leaders,
The freest of the free!
Her sons shall still press onward,
The foremost in the fight,
Till everywhere her watchword
Shall ring, "Let there be light!"



Clark University Bulletin

WORCESTER, MASSACHUSETTS

SUMMER SCHOOL

Interession

June 11 to June 30

Summer Session

July 2 to August 18

1962

CALENDAR

JUNE

- 11 Monday, Intersession Registration 9-12 noon
First class meeting 2 P.M.
- 27 Wednesday, Registration for evening classes
- 30 Saturday, Examinations for Intersession courses, 9-12 noon

JULY

- 2 Monday, Summer Session Registration for day classes 9-12 noon
Evening classes begin 6 P.M.
- 3 Tuesday, Day classes begin 8 A.M.
- 4 Wednesday, Independence Day—a holiday
- 24 Tuesday, Examinations in double courses concluding after first three weeks
- 25 Wednesday, Beginning of double courses of second three weeks

AUGUST

- 15 Wednesday, No day classes
Examinations for evening classes meeting at 6 P.M.—7 to 10 P.M.
- 16 Thursday, Examinations for classes meeting at 8 A.M.—9 to 12 noon
- 17 Friday, Examinations for classes meeting at 9:15 A.M.—9 to 12 noon
for evening classes meeting at 8 P.M.—7 to 10 P.M.
- 18 Saturday, Examinations for classes meeting at 10:30 A.M.—9 to 12 noon
for classes meeting at 11:45 A.M.—2 to 5 P.M.

1962

JUNE						
S	M	T	W	T	F	S
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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY						
S	M	T	W	T	F	S
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8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST						
S	M	T	W	T	F	S
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Clark University SUMMER SCHOOL

Worcester, Massachusetts

Intersession, June 11 to June 30

Summer Session, July 2 to August 18

1962

The Clark University Bulletin is published in February, April, June, July, August, September, October, and December. Second-class postage paid at Worcester, Massachusetts. Correspondence may be addressed to: The Summer School, Clark University, 950 Main Street, Worcester 10, Massachusetts.

A Unique Opportunity to Learn

Small groups of students working in courses they enjoy typify the educational opportunity offered by the Clark University Summer School. Superior teaching and interested students combine to make for effective learning. Active participation by the students in class discussions is encouraged.

Courses are available in the arts and sciences at both the graduate and undergraduate level, permitting students to accelerate their work toward a degree. In addition, the selection of courses in the modern languages permits current and prospective graduate students to better prepare themselves for graduate study.

There is a variety of courses available for teachers who seek professional advancement. The selection of subject matter courses is excellent, and several education courses will be offered.

Evening classes in liberal arts and business will be offered for those who have part time summer jobs during the day and wish to gain academic credit at the same time, as well as for those who are continuing their studies in the Clark University Evening College.

Clark University has an excellent library employing the open shelf system with an opportunity for unlimited browsing of the large and varied collection of modern books, professional periodicals and an unusually large map collection.

Clark is ideally located for summer study. The summer climate is excellent and the University is near numerous cultural and recreational facilities. Trips to Tanglewood, to ball games in Boston, and swimming in the nearby ponds have been very popular. The fine tennis courts will be available for use by Summer School students.

SPECIAL PROGRAMS

EDUCATION

The Department of Education of Clark University will offer a "Counseling and Guidance Training Institute." This program is designed to provide advanced instruction and supervised practice in counseling and guidance for secondary school educators.

The Institute will run from June 25 to August 3, and will carry credit for two semester courses (or 6 semester hours) of graduate in Education.

HISTORY

Old Sturbridge Village and Clark University with the financial assistance of the William Robertson Coe Foundation of New York will offer a four weeks course, "Rural New England in the American Tradition, 1790-1840" from July 2 to July 28. Fellowships will be awarded to high school teachers of American History throughout the United States. Classes will be conducted at the Village by Dr. Sydney James of Brown University and credit will be granted through Clark University. Students awarded the fellowships from beyond commuting distance will live in residence at the Village as part of their grant. Local students will receive tuition, lunch, some commutation allowance, and books. Application should be made through the Summer School.

MATHEMATICS

UNDER the direction of Dr. John S. Stubbe a "Summer Institute for Mathematics Teachers in Secondary Schools" will again be offered under National Science Foundation sponsorship. The Institute begins July 2 and ends August 10, 1962, and will be conducted by the Department of Mathematics. The Institute, planned for a total of forty participants, has the principal aim of strengthening the mathematics background and professional competence of selected teachers.

SOCIAL STUDIES

Under the direction of Dean Henry C. Borger, Jr. and Dean Robert F. Campbell a "Social Studies Institute" will be held from June 25-June 30. This institute for school superintendents, junior and senior high school principals and department heads will be devoted to an intensive exploration of some of the problems involved in planning the high school social studies curriculum.

DEGREES AND CREDITS

All courses offered are accepted at Clark for credit toward the degrees of Bachelor of Arts and Bachelor of Science in Business Administration, or either of the Evening College degrees unless specifically limited to one of the degrees as stated in the course description. Many courses in the Summer School count toward the degrees of Master of Arts, Master of Arts in Education, and Doctor of Philosophy. Approval should, however, be obtained in advance from a student's major department.

The degree of Master of Arts may be obtained in certain fields by completing satisfactorily a full-time program for five summers. It is best for students interested in such a program to discuss their plans directly with the Chairman of the department concerned. Graduate students formally registered in the Summer School may, with the approval of their major department, enroll in thesis courses under the direction of regular members of the staff other than those listed in the Summer School Bulletin.

Each single course offered in the Summer School is equivalent to a half-year course of the academic year and yields three semester hours of credit. The double courses in the languages, statistics and mathematics which meet for two lecture periods a day for six and one-half weeks are equivalent to year courses (six semester hours credit).

Interession courses meet for two 70 minute periods at 9:00 A.M. and at 2:00 P.M., Monday through Friday. Summer Session courses during the day meet for one 70 minute period Monday through Friday. Double courses meet for two 70 minute periods five days a week. Evening classes meet for 110 minutes on Monday, Wednesday and Friday evenings. Exceptions to the above time schedule are listed under course descriptions.

A student may carry in a normal program one course in the Interession (three semester hours) and two courses in the Summer Session (six semester hours). Permission to carry an additional course may be granted only in exceptional cases if approved in writing prior to registration. Course changes after the third day of classes must be approved by the Director.

One transcript of a student's Summer School record is available free of charge, and application for it should be made in the Summer School office. There is a \$1.00 fee for each additional transcript.

TUITION AND FEES

A matriculation fee of \$5.00 is required of all students entering Clark University for the first time. The tuition for each three semester hour course is \$85.00. Persons who wish to audit a course without receiving credit register and pay tuition at the stated rate. However, students taking two courses for credit during the Summer Session may audit a third course without additional cost. Tuition and fees must be paid in the Summer School Office immediately following registration. A fee for late registration of \$3.00 must be paid by students who fail to complete registration within the official Registration Period.

Students who attend not more than three days of classes in either the Interession or Summer Session and are forced to withdraw with just

cause, may receive a refund of their tuition on applying in writing to the Director of the Summer School. Students of the Summer Session who are forced to leave before the beginning of the second week may expect a refund of two-thirds of their tuition, those who leave before the beginning of the third week may have one-third of their tuition refunded. Students leaving after the beginning of the third week of classes are not entitled to any refund.

Students leaving after the third day of classes are required to fill out a withdrawal form.

LIVING FACILITIES AND COSTS

Rooms will be available for both men and women in the new University dormitories but reservations should be made promptly on or before June 1. Room rent is \$10.00 per week for single room occupancy and \$7.50 for double. A room and key deposit of \$10.00 is required in advance to hold a room. This deposit is not part-payment for the rent. The \$10.00 will be returned in full if the room is undamaged when the key is returned. The University Dining Hall will be open for breakfast and luncheon during the Interession and for all three meals during the Summer Session from Monday morning through Saturday noon.

VETERANS

Veteran's attending the 1962 Summer School should present their supplemental Certificate of Eligibility at the Bursar's Office not later than Friday of the first full week of the term. The Director of the Summer School should be consulted when unusual or unexpected situations arise.

Veterans are reminded that Certificates of Eligibility held during the Spring Semester 1962 do not apply to the Summer School and that a new application must be completed for the course of summer study.

ELIGIBILITY FOR COURSES

Courses beginning with "1" are open to all undergraduates except freshmen. Courses preceded by an "F" are open to freshmen. Courses beginning with "2" are open to advanced undergraduates and graduate students. Teachers working toward degrees or credits in Education should consult with Professor Vernon Jones, Chairman of the Department of Education.

ADMINISTRATIVE OFFICERS OF THE UNIVERSITY

Howard B. Jefferson, *President*

Robert M. Hyde, *Vice President*

Robert F. Campbell, *Dean of the College*

Thomas J. Dolphin, *Director of the Summer School*

SUMMER SCHOOL STAFF

(All are members of the Clark University Faculty unless otherwise indicated)

Merritt G. Abrash, Ph.D., *Assistant Professor of History*

Karl O. E. Anderson, Ph.D., *Associate Professor of English*

Karl J. Arndt, Ph.D., *Professor of German*

Robert W. Baker, Ph.D., *Associate Professor of Psychology*

George A. Balko, Jr., M.B.A., *Assistant Professor of Business Administration*

Frederick E. Bamford, M.B.A., *Assistant Professor of Economics and Business Administration*

Raymond E. Barbera, Ph.D., *Assistant Professor of Romance Languages*

James F. Beard, Jr., Ph.D., *Associate Professor of English*

Robert N. Beck, Ph.D., *Professor of Philosophy*

Wesley E. Bryers, A.B., *Instructor in Geology*

Guy H. Burnham, A.M., *Instructor in Geography and Cartography*

William H. Carter, Jr., Ph.D., *Associate Professor of English*

Morris H. Cohen, Ph.D., *Associate Professor of Government*

James S. Edwards, M.A., *Associate Professor of German*

Wesley Fuller, M.A., *Visiting Lecturer, Instructor of Music, Wheaton College*

George E. Hargest, M.B.A., *Associate Professor of Economics and Business Administration*

John O. Iatrides, M.A., *Teaching Assistant of Government*

Frederick W. Killian, LL.B., *Associate Professor of Sociology*

Curtis F. Marchant, M.A., *Assistant Professor of Romance Languages*

Richard H. McKey, Jr., Ph.D., *Visiting Lecturer, Instructor in History, Worcester Polytechnic Institute*

F. Eugene Melder, Ph.D., *Professor of Economics*

George H. Merriam, Ph.D., *Director of Admissions, Lecturer in History*

Nicholas L. Onorato, Ph.D., *Visiting Lecturer, Associate Professor, Department of Economics, Business and Government, Worcester Polytechnic Institute*

COUNSELING and GUIDANCE INSTITUTE

CLARK
UNIVERSITY

JULY 2 --- AUGUST 10, 1962

Clark University announces a special six-week program in COUNSELING and GUIDANCE. The program will be offered under the auspices of the Clark University Summer School.

Aim: The purpose of the program will be to upgrade the education and training of persons who either are currently functioning as Counselors, or

who are preparing to function in this capacity.

The Program: Whereas the emphasis of the program will be on the counseling function, attention will be given to the related areas of tests and measurement, and personality-development. The approach will involve a joint consideration of fundamental theoretical concepts and of the application of theory to practical problems. Problems of achievement and of educational-vocational development will receive particular attention.

The class will meet twice daily, (9:00 - 10:30 a. m. and 1:00 - 2:30 p.m.) five days a week for the duration of the six-week program. Typically, the morning periods will be devoted to formal instruction (lectures, discussions, and seminars), while the afternoon periods will be devoted to workshop-type activities (case conferences, the consideration of practical approaches to problems of learning, motivation, and educational-vocational planning). A significant aspect of the afternoon activities will be the supervised counseling of high school students.

Enrollment: The number of enrollees in the Institute

will be limited to fourteen (14)

Tuition: The Institute will be the equivalent of two summer school semester courses, and the tuition will be a total of \$170.00, which is the charge for two semester courses in the Summer School.

Eligibility: Eligibility will be judged by a Committee on the basis of the applicant's academic background and preparation. The amount of professional education in Guidance which is considered most desirable for admission in the Clark Institute is between a minimum of approximately three semester courses in measurement and guidance (combined), on the one hand, and about seven or eight semester courses, on the other.

Graduate Credit: Enrollees who successfully pass the work of the Institute will receive six (6) semester hours of graduate credit in guidance in the Department of Education.

Living Accomodations: Arrangements may be made for room and board, if desired. Information pertaining to the charges for these accomodations may be obtained upon request.

Application and Admission

Data: Application blanks will be mailed upon request. Since enrollment will be limited to fourteen, the following information should be noted carefully.

Preferred consideration will be given those persons who submit their applications by April 2, 1962. Applications which are received by that date will be evaluated immediately, and these candidates will be notified by April 16 as to whether or not they have been accepted for the program.

Should there be places remaining in the class after the April 2 evaluation, subsequent applications will be considered.

Staff of the Institute:

James M. Coffee, Ed. D.,
Associate Professor of Education.

Warren D. Gribbons, Ed. D.,
Assistant Professor of Education.

Requests for application blanks and further information pertaining to the Institute should be directed to:

Dr. James M. Coffee
Office of Guidance and
Placement
Clark University
Worcester, Massachusetts

SUMMER SCHOOL STAFF

Evelyn Robinson, M.A., *Visiting Lecturer in Education*
Harris Rosenkrantz, Ph.D., *Associate Professor (Affiliate) of Biology*
Mordecai Rubin, Ph.D., *Assistant Professor of Romance Languages*
Neil R. Schroeder, A.B., *Instructor in English*
Dayton D. Shepherd, M.A., *Lecturer in Education*
Virginia Vidich, M.A., *Visiting Lecturer in Sociology*
Samuel Van Valkenburg, Ph.D., *Professor of Geography*
Edgar E. Webber, M.S., *Visiting Lecturer, Instructor in Botany, Wellesley College*
Joachim F. Wohlwill, Ph.D., *Assistant Professor of Psychology*

SUMMER INSTITUTE FOR HIGH SCHOOL AND JUNIOR COLLEGE TEACHERS OF MATHEMATICS

Supported by the National Science Foundation

John S. Stubbe, *Director*

Bruce A. Bevelheimer, M.A., *Instructor in Mathematics*
Henry Frandsen, M.A., *Assistant Professor of Mathematics*

On Wednesday of each week, lectures will be given by members of the staff or, occasionally, by visiting mathematicians.

COUNSELING AND GUIDANCE TRAINING INSTITUTE

James M. Coffee, EdD., *Associate Professor of Education*
Warren D. Gribbons, Ed.D., *Associate Professor of Education*

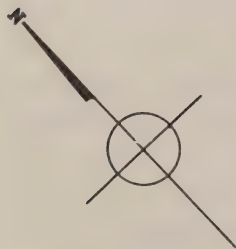
SOCIAL STUDIES INSTITUTE

Henry C. Borger, Jr., Ph.D., *Professor of Education and Dean of Students*
Robert F. Campbell, Ph.D., *Professor of History and Dean of the College*

RURAL NEW ENGLAND IN THE AMERICAN TRADITION, 1790-1840

Sydney James, Ph.D., Brown University, Providence, Rhode Island

MAIN CAMPUS



1. CAMPUS CLERK HALL
 2. WOMEN'S DORMITORY
 3. STUDENT UNION
 4. GEOGRAPHY BUILDING
 5. JAPANESE LABORATORY
 6. WOMEN'S DORMITORY
 7. PRESIDENT'S HOME
 8. FACULTY HOME
 9. MEN'S DORMITORY
 10. EAST ARBORETUM
 11. UNIVERSITY APARTMENTS
 12. INFIRMARY BUILDING

COURSE OFFERINGS

Biology

Interession

F.BIO.—S.171 ECOLOGY OF FRESH-WATER ALGAE

Edgar E. Webber, *Visiting Lecturer in Biology*

An introduction to the fresh-water algae. Consideration of environmental factors, chemical and physical, which influence growth and distribution. Representatives from the local flora will be studied.

Laboratory fee: \$10.00

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

Laboratory: To be arranged.

Summer Session

BIO.—S.11 INTRODUCTORY BOTANY

Edgar E. Webber, *Visiting Lecturer in Biology*

A study of the anatomy, morphology, physiology, and reproduction of the angiosperm plant.

Laboratory fee: \$10.00

Mon. through Fri., 9:15–10:25 A.M.

Laboratory: To be arranged.

BIO.—S.262 INSTRUMENTAL PROCEDURES IN BIOLOGICAL INVESTIGATIONS

Harris Rosenkrantz, *Associate Professor (Affiliate) of Biology*

The theory and application of various analytical procedures and use of modern instrumentation in biological problems will be discussed. A practical introduction to the analytical balance, centrifuge, vacuum distillation, pH, dialysis, chromatography, counter-current distribution, photoelectric colorimetry, fluorometry, turbidometry, spectrophotometry and spectroscopy will be carried out. Instrumentation will be coordinated with techniques of tissue preparation, histochemistry, and radioactive tracers.

Laboratory fee: \$10.00

Lectures Mon. through Thurs., 8:00–9:10 A.M.

Laboratory Fri. 8:00–12:00 Noon

BIO.—S.300 RESEARCH IN BIOLOGY

Graduate research studies may be carried out under the direction of available staff members during the Summer School. The course is primarily for those who have been previously enrolled in the Graduate School. Approval by the staff member will be required prior to admission.

Business Administration

Summer Session

*B.A.—S.16 BUSINESS STATISTICS

George E. Hargest, *Associate Professor of Business Administration*

This course is designed to give the student a knowledge of the basic statistical techniques and procedures as they are applied to business and economic data. Lectures and laboratory exercises.

Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

F.—B.A.—S.17 PUBLIC SPEAKING

James F. Beard, Jr., *Associate Professor of English*

For course description see section on English.

(Candidates for the B.S. in B.A. degree should use course No. B.A.—S.17; candidates for the A.B. degree should use the course No. Eng.—S.12.)

Mon., Wed. and Fri., 8:00–9:50 P.M.

* Double course, two classes daily through Summer Session.

B.A.—S.18 CORPORATION FINANCE

Frederick E. Bamford, *Assistant Professor of Economics and Business Administration*

A study of the financial structure of modern industry with emphasis on the nature of the business corporation, its financial practices, types of securities, capital structure, financial reorganization, and the problems of internal financial control. The case method will be employed.

Mon. through Fri., 10:30—11:40 A.M.

B.A.—S.109 SALES MANAGEMENT

George A. Balko, Jr., *Assistant Professor of Business Administration*

An examination of the problems of organizing and directing the efforts of a sales force. This involves the establishment of a sales plan, the place of the sales department in the company, the formulation of sales policies, and the organization of the sales department; recruiting, training, equipping, motivating, compensating and measuring performance of salesmen. (This course may not be counted toward the A.B. degree, but only toward a business degree.)

Mon., Wed. and Fri., 8:00—9:50 P.M.

B.A.—S.132 HUMAN RELATIONS IN INDUSTRY

Frederick E. Bamford, *Assistant Professor of Economics and Business Administration*

The work consists of the analysis of concrete cases involving the handling of human situations at all levels of activity. Study centers around the development of understanding of the psychological, sociological and economic factors of motivation in industry.

Mon. through Fri., 9:15—10:25 A.M.

B.A.—S.225b MARKETING POLICIES

George A. Balko, Jr., *Assistant Professor of Business Administration*

An analysis of how such forces as competition, demand, cost, distribution structure, and legislation affect marketing decisions of the individual company in regard to products, brands, channels of distribution, selling, advertising, sales promotion, and prices.

Mon., Wed. and Fri., 6:00—7:50 P.M.

Economics*Intersession***EC.—S.211b COMPARATIVE ECONOMIC SYSTEMS**

F. Eugene Melder, *Professor of Economics*

An analysis of contemporary advanced and developing industrial economic systems on the basis of comparative institutions and social processes of control and rational calculation. Consideration of economic systems will include reference to specific national economies such as those organized on the basis of the free market, liberal socialism and authoritarianism, including mixes of these types.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

*Summer Session***EC.—S.13 MONEY AND BANKING**

Nicholas L. Onorato, *Visiting Lecturer in Economics*

The principles of money and banking; characteristics of the American monetary and banking system; theoretical relations of money, prices, income.

Mon. through Fri., 10:30—11:40 A.M.

Education

Summer Session

ED.—S.22 READING AND LITERATURE IN THE UPPER ELEMENTARY AND LOWER SECONDARY GRADES

Evelyn R. Robinson, *Visiting Lecturer in Education*

This course is designed to help teachers and parents increase young people's understanding and pleasure in reading. Emphasis will be placed on the selection of book and other reading materials to meet the varied abilities and interests of young people. Demonstrations will be given of ways to motivate reading. Double period for 3 weeks, July 25—Aug. 18, 3 semester hours credit.

Mon. through Fri., 9:15–11:40 A.M.

ED.—S.263a METHODS AND MATERIALS IN THE ELEMENTARY SCHOOL—PRINCIPLES AND DEMONSTRATIONS

Dayton D. Shepherd, *Lecturer in Education*

A course in which modern methods and materials in teaching will be demonstrated with a class of children in the middle grades. A study will be made of the basic principles of teaching with particular emphasis in the social studies and language arts in the elementary school and the correlation of these subjects with other fields. Demonstration will be given in classroom grouping and methods of management, showing the provision for individual differences in teaching and the development of effectiveness independent study. Double period for 3 weeks, July 2–24, 3 semester hours credit.

Mon. through Fri., 9:15–11:40 A.M.

ED.—S.290b PHILOSOPHY OF EDUCATION

Robert N. Beck, *Professor of Philosophy*

An examination of aims, processes and materials of education with special reference to the influence of philosophical ideas on educational problems.

Mon. through Fri., 8:00–9:10 A.M.

ED.—S.331 SOCIAL STUDIES INSTITUTE: PLANNING THE HIGH SCHOOL CURRICULUM

Henry C. Borger, Jr., *Dean of Students and Professor of Education*

Robert F. Campbell, *Dean of the College and Professor of American History*

An intensive institute for superintendents, junior and senior high school principals and social studies department heads. Topics will include the objectives of the social studies curriculum, the role of geography, history and other science disciplines in the curriculum, planning a sequence of courses and the Advanced Placement Program. One or two semester hours credit. Tuition: \$60

Conference Center June 25–30, Mon. through Sat. 9:30 A.M. and 1:00 P.M.

*ED.—S.346 COUNSELING AND GUIDANCE TRAINING INSTITUTE

James M. Coffee, *Associate Professor of Education*

Warren D. Gribbons, *Assistant Professor of Education*

The Institute, running from July 2 to August 10, is designed to provide advanced instruction in counseling and guidance. It will meet three hours daily for five days per week, and carry credit for two semester courses of graduate work in Education. The emphasis of the work will be on principles of counseling and guidance, personality development as related to counseling; and tests and other evaluative methods applied to Guidance. Special attention will be given to the area of educational and vocational development. Supervised practice in counseling of high school students will be a prominent activity of the program.

Mon. through Fri., 9:00–10:30 A.M. and 1:00–2:30 P.M.

* Double course, two classes daily through Summer Session.

English

Interession

F.—ENG.—S.11a ENGLISH COMPOSITION AND LITERATURE

Karl O. E. Anderson, *Associate Professor of English*

The purpose of English 11 is to develop clarity and accuracy in reading and writing. After a short review of the principles of rhetoric, the course will be devoted to the study of expository essays and short stories. Themes and individual conferences. This course, together with English 11b, is a requirement for the Clark A.B.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

ENG.—S.125 THE SHORT STORY

William H. Carter, Jr., *Associate Professor of English*

This course involves the intensive reading of a wide range of stories which exemplify a variety of fictional methods, affording the student some knowledge of the history of this literary type. The primary aim is to help the student develop an appreciation of the broadly human values implicit in the short story.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

ENG.—S.140 MODERN CONTINENTAL FICTION

Curtis Marchant, *Assistant Professor of Romance Languages*

Selected novels and shorter fiction of French, German and Italian writers, read in translation. Starting with Flaubert's *Madame Bovary* as the beginning of the modern novel, the course will touch on naturalism (Verga) and then concentrate on some of the great figures of the 20th century: Gide, Mann, Kafka, Collette.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

Summer Session

F.—ENG.—S.11b ENGLISH COMPOSITION AND LITERATURE

Neil R. Schroeder, *Instructor in English*

This second half of the year course aims to help the student develop sound critical principles in evaluating fiction and poetry.

Mon., Wed. and Fri., 8:00–9:50 P.M.

F.—ENG.—S.12 PUBLIC SPEAKING

James F. Beard, Jr., *Associate Professor of English*

A course in the fundamentals of public speaking, emphasizing both the composition and delivery of the most common types of speeches, such as introductory, expository, and impromptu speeches. Special attention will be given to problems of human relations, voice tests, vocabulary development, and the acquisition of self-confidence, poise, and effective communication techniques. Practice speeches, conference, and voice recordings to enable the student to recognize and correct his speech deficiencies. (Candidates for the B.S. in B.A. degree should use course No. B.A.—S.17; candidates for the A.B. degree should use the course No. Eng.—S.12.)

Mon., Wed. and Fri., 8:00–9:50 P.M.

ENG.—S.106 CONTEMPORARY AMERICAN FICTION

James F. Beard, Jr., *Associate Professor of English*

A critical introduction to the best American fiction since about 1900, with emphasis on its esthetic values, sociological insights, and philosophic implications. Authors read and discussed will include Henry James, Theodore Dreiser, F. Scott Fitzgerald, Sherwood Anderson, Ernest Hemingway, William Faulkner, and others.

Mon., Wed. and Fri., 6:00–7:50 P.M.

ENG.—S.127 MODERN CONTINENTAL DRAMA

Neil R. Schroeder, *Instructor in English*

A course in the literature of the continental theatre which will consider the various movements and trends that have influenced modern drama. Special emphasis will be placed on the major figures of the period from Ibsen and Strindberg to Brecht and Anouilh.

Mon. through Fri., 10:30–11:40 A.M.

Fine Arts

Interession

F.F.A.—S.12 INTRODUCTION TO MUSIC

Wesley Fuller, *Visiting Lecturer in Music*
 What to listen for in Music. Designed for the student with no previous musical training or experience, it will deal with the basic theoretical elements and materials of music.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

Summer Session

F.A.—S.190 HISTORY OF ART: MANNERISMS TO THE PRESENT

John T. Murphey, *Museum Instructor, Worcester Art Museum*
 A survey of Western Art from the 16th to the 20th century. Observing the large stylistic current, the personal modification within these, and the cultural backgrounds to their formation. Lectures with slides of painting, sculpture and architecture.

Mon., Wed. and Fri., 6:00–7:50 P.M.

Geography

Summer Session

*F.—GEO.—S.191 CARTOGRAPHY

Guy H. Burnham, *Instructor in Geography, Cartography*
 A discussion of various graphic methods and their application to geographic data. Since emphasis will be placed upon the mastery of cartographic tools and instruments, this course should prove particularly helpful to those planning to enter government service or to do illustrative work. This course may be taken for double credit by special arrangement with the instructor.

Mon. through Fri., 1:30 P.M. and afternoon workshop

GEO.—S.201(b) POLITICAL GEOGRAPHY

Samuel Van Valkenburg, *Professor of Geography*
 Major political problems of the world as related to geographic factors and applied to selected regions.

Mon. through Fri., 8:00–9:10 A.M.

GEO.—S.285(a) REGIONAL GEOGRAPHY OF EUROPE

Samuel Van Valkenburg, *Professor of Geography*
 A detailed analysis of the countries of Europe. Political, social problems as related to geographic bases—with particular emphasis on the Common Market.

Mon. through Fri., 10:30–11:40 A.M.

*GEO.—S.291 CARTOGRAPHY

Guy H. Burnham, *Instructor in Geography, Cartography*
 Similar course to S.191 with additional work required for graduate credit.

Mon. through Fri., 1:30 P.M. and afternoon workshop.

GEO.—S.300 RESEARCH IN GEOGRAPHY

Graduate research studies may be carried out under direction of available staff members during the Summer School. The course is primarily for those who have been previously enrolled in the Graduate School. Approval by the staff member will be required prior to admission.

* Double course, two classes daily through Summer Session.

Geology

Interession

F.—GEOL.—S.12b HISTORICAL GEOLOGY

Wesley E. Bryers, *Instructor in Geology*

This semester deals with the origin of continents and ocean basins, their development through time; the glacial periods and the antiquity of man; development of surface features of North America; and evolution of life through geologic time. Laboratory work consists of map interpretation and fossil identification.

Lectures: Mon. through Fri., 9:00 A.M. and 2:00 P.M.
Laboratory: Mon. and Wed., 1:30 P.M.-4:00 P.M.

Summer Session

F.—GEOL.—S.12a PHYSICAL GEOLOGY

Wesley E. Bryers, *Instructor in Geology*

Introduction to geology, origin of the earth, its development through time; the study of the common minerals and rocks, their structure, origin and occurrence; geological activities of the air, streams, and the sea; nature of glaciers, volcanoes and earthquakes, and the age of the earth. Laboratory work consists of mineral and rock identification.

Mon. through Fri., 10:30-11:40 A.M.

History and Government

Interession

GOV.—S.143 PRINCIPLES OF INTERNATIONAL RELATIONS

Merritt G. Abrash, *Assistant Professor of History*

After examining the factors which determine the general nature of relations between states, several major international crises will be analyzed, with the object of uncovering the different methods of executing foreign policy and the elements which shape the foreign policies of particular states. The balance of power, ideology, imperialism, diplomacy, and international law and organization will be among the subjects brought into the discussion.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

HIST.—S.231 AMERICAN COLONIAL HISTORY, 1607-1775

George H. Merriam, *Director of Admissions, Lecturer in History*

A survey course with particular emphasis upon the New England area from the time of the first settlements to the revolutionary period. America's colonial past will be studied through readings in original documents and lectures. Field trips.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

Summer Session

GOV.—S.251a AMERICAN POLITICAL PARTIES

Morris H. Cohen, *Associate Professor of Government*

A study of the functioning of American party organizations, pressure groups, and the electorate in American politics. Emphasis is placed upon current problems and trends in the field.

Mon. through Fri., 8:00-9:10 A.M.

HIST.—S.16 THE COLD WAR

Merritt G. Abrash, *Assistant Professor of History*

An analysis of the conflict between the Soviet Union and the United States, from its inception after the Russian Revolution to the present "peaceful co-existence." The lectures and discussions will attempt to clarify the various aspects—ideological, military, and others—of Soviet-American hostility. (This course is interchangeable for credit with Clark's Government 14 (second semester) or its equivalent elsewhere.)

Mon. through Fri., 9:15-10:25 A.M.

History S239 - Rural New England in the American Tradition, 1790-1840, given in conjunction with Old Sturbridge Village, summer session, 1962.

This course dealt with the most significant social and intellectual aspects of rural New England during the period indicated. An extensive reading list was supplemented by a first-hand experience in observing aspects of the early New England environment as represented by Old Sturbridge Village. In addition, field trips were taken to such places as Concord, historic Boston, Plymouth, and Salem. The class met morning and afternoon, 5½ days a week, July 3 through July 29. The instructor was Dr. Sidney James of Brown University and the course carried 4 semester-hours credit.

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HIST.—S.232 AMERICAN SOCIAL HISTORY SINCE THE CIVIL WAR

Richard H. McKey, Jr., *Lecturer, Clark University Evening College*

An investigation into the sources of modern American conduct and points of view as they have been shaped by our social developments since 1865. The course will be a study of the origins and effect of our predominant domestic concerns; and an attempt to determine why our contemporary preoccupations both at home and abroad so greatly reflect these matters.

Mon. through Fri., 11:45 A.M.—12:55 P.M.

HIST.—S.284 THE MIDDLE EAST IN THE 20TH CENTURY

John O. Iatrides, *Teaching Assistant of Government*

A survey of the historical development, government and international relations of the countries of the Middle East since 1914. Greater emphasis will be placed on events since the second World War and on the role of the region in world politics today.

Mon., Wed. and Fri., 6:00–7:50 P.M.

LANGUAGES

French

Intersession

F.—FR.—S:10 ELEMENTARY FRENCH REFRESHER

Mordecai Rubin, *Assistant Professor of Romance Languages*

An intensive course in which the student will spend three weeks studying, practicing, speaking and reading French. The class will meet for three 50 minute periods each day, attendance being required at all classes, with laboratory work in pronunciation. Classes will meet at 8:00 to 8:50 (Reading), 10:50 to 11:40 (Grammar), 2:00 to 2:50 (Pronunciation and Conversation). This course is recommended as a refresher for out-of-practice French students before taking Intermediate French or more advanced courses. It can be taken as a substitute for the second half of French 11 at Clark, thus validating credit for the first half. Auditors are welcome on condition that they participate fully in the course. Limited to 14 students.

Laboratory fee: \$10.00

Mon. through Fri., 8:00 and 10:50 A.M.; 2:00 P.M.

Summer Session

*F.—FR.—S:11 ELEMENTARY FRENCH

Instructor to be announced

A course for beginners, including the elements of grammar, pronunciation and conversational patterns, graded readings and the writing of simple French.

Laboratory fee: \$20.00 Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

*F.—FR.—S:12 INTERMEDIATE FRENCH

Curtis Marchant, *Assistant Professor of Romance Languages*

This course aims to develop all the fundamental skills—pronunciation, conversation, grammar, reading—necessary as a basis for any effective use of the language. The approach will be conversational insofar as practicable. Carefully graded readings will be chosen primarily for affording insights into the culture of France. Open to students who have had the elements of French in a first-year college course or the equivalent. Indivisible course. Laboratory fee: \$20.00.

Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

* Double course, two classes daily through Summer Session.

German***F.—GER.—S.11 INTRODUCTORY GERMAN**Karl J. R. Arndt, *Professor of German*

A complete first year college course in German which will make extensive use of modern language teaching aids. Aural-oral practice. Early in the course the student will be introduced to a series of graded readers, which must be mastered by the end of the course and which are designed to prepare him for independent reading of German newspapers and journals. The course will demand the full time and attention of those interested.

Mon. through Fri., 8:00–9:10 A.M. and 11:30 A.M.–12:40 P.M.

***F.—GER.—S.12 INTERMEDIATE GERMAN**James S. Edwards, *Associate Professor of German*

Review of grammar, translation from and into German, rapid reading of modern German prose. An intensive course covering the material of the regular second year of college German. The course will demand the full time and attention of those interested.

Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

Spanish***F.—SP.—S.11 INTRODUCTORY SPANISH**Raymond E. Barbera, *Assistant Professor of Romance Languages*

For beginners. The elements of grammar and pronunciation; carefully graded reading; exercises in speaking and writing.

Laboratory fee: \$20.00.

Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

F.—SP.—S.12 INTERMEDIATE SPANISHInstructor to be announced*

This course aims to develop all the fundamental skills—pronunciation, conversation, grammar, reading—necessary as a basis for any effective use of the language. The approach will be conversational insofar as practicable. Carefully graded readings will be chosen primarily to afford some insights into Hispanic culture, of both Spain and Spanish America. Open to students who have had the elements of Spanish in a first-year college course or the equivalent. Indivisible course.

Laboratory fee: \$20.00 Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

Mathematics*Summer Session****MATH.—S.201 FUNDAMENTAL CONCEPTS OF MATHEMATICS**Bruce L. Bevelheimer, *Instructor in Mathematics*

The course is designed for the teacher of mathematics in the secondary schools whose scholastic record in college is good but whose mathematical background is weak. This course will emphasize postulational thinking and the general and abstract nature of mathematics and will be concerned with the following topics; deductive logic, the number system, the algebra of sets, the basic concepts of analytic geometry, the idea of function, cardinal number.

There will be one section of Course S.201 with twelve participants. Not more than five persons other than members of the Institute may enter the course and permission of the Director of the Institute must be secured. Double course, 6 hours of credit, undergraduate or credit toward M.A. in Ed.

Mon. through Fri., 9:15–10:15 A.M. and 10:45–11:45 A.M.

* Double course, two classes daily through Summer Session.

***MATH.—S.212 INTRODUCTION TO CALCULUS**Henry Frandsen, *Assistant Professor of Mathematics*

Will include topics in analytic geometry, and careful study of the idea of function, limits, differentiation of algebraic functions and of certain transcendental functions, and the definite integral. 6 hours of credit, undergraduate or credit toward M.A. in Ed. Limited to five persons in addition to members of the Institute. Permission of the Director of the Institute must be secured.

Mon. through Fri., 9:15–10:15 A.M. and 10:45–11:45 A.M.

Philosophy*Summer Session***PHIL.—S.119 BASIC ISSUES IN PHILOSOPHY: THE IDEA OF GOD**Robert N. Beck, *Professor of Philosophy*

Reading and discussion of materials concerned with some of the fundamental and recurring problems in philosophy. Subject for 1962: The Idea of God, as discussed in some of the classical religious and philosophical texts of Western culture.

Mon. through Fri., 9:15—10:25 A.M.

ED.—S.290b PHILOSOPHY OF EDUCATIONRobert N. Beck, *Professor of Philosophy*

The course description is given under Education.

Mon. through Fri., 8:00–9:10 A.M.

Psychology*Intersession***PSY.—S.172a THEORIES OF PERSONALITY**Robert W. Baker, *Associate Professor of Psychology*

A survey of the various theoretical approaches to the study of personality, with particular emphasis on trait theories, typologies, field theory, and psychoanalysis. Also considered are the determinants of personality development and methods of appraising personality.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

*Summer Session***F.—PSY.—S.11a GENERAL PSYCHOLOGY***Instructor to be announced*

An introduction to the principles of human behavior.

Mon. through Fri., 9:15–10:25 A.M.

PSY.—S.103b THE ABNORMAL PERSONALITYRobert W. Baker, *Associate Professor of Psychology*

The course will be devoted to a study of the development of the abnormal personality and a survey of the major types of abnormal behavior.

Mon. through Fri., 11:45 A.M.–12:55 P.M.

PSY.—S.150a INTRODUCTION TO CHILD PSYCHOLOGYJoachim F. Wohlwill, *Assistant Professor of Psychology*

This course will consider the normal process of development of the child from infancy up to adolescence, with emphasis on perception, thinking, emotion, and social behavior.

Mon., Wed. and Fri., 8:00–9:50 P.M.

* Double course, two classes daily through Summer Session.

PSY.—S.190 INDUSTRIAL PSYCHOLOGY

Instructor to be announced

A course dealing with the psychological factors underlying the interaction of individuals in their everyday working activities. Motivations, attitudes and values, as they affect human relations in industry will be discussed. Problems of industrial morale and problems of supervisory relationships will be considered, as will be the use of psychological tests and other techniques in job evaluation, personnel selection and placement.

Mon. through Fri., 10:30–11:40 A.M.

Sociology

Interession

SOC.—S.12a INTRODUCTION TO CULTURAL ANTHROPOLOGY

Virginia W. Vidich, *Visiting Lecturer in Sociology*

The evolution of man and his culture with emphasis on processes of symbolism, adaptation, invention and acculturation for racial differentiation, community organization, technological development and origin and growth of civilizations; primitive, historic and modern culture complexes compared.

Mon. through Fri., 10:00 A.M. and 2:00 P.M.

Summer Session

SOC.—S.11b SOCIAL INSTITUTIONS

Frederick W. Killian, *Associate Professor of Sociology*

A study of the major social institutions, their role and function in Western European and American societies: kinship, family, economies, law and politics, religion, education. Institutions related to social control; the exercise of power and authority; and the problem of policy-making; institutions and their components, characteristics, development and retrogression. The problem of personnel, the self-others problem; human relations and institutions. A seminar type course with student participation.

Mon. through Fri., 10:30–11:40 A.M.

SOC.—S.14 CRIME, DELINQUENCY, AND SOCIETY

Frederick W. Killian, *Associate Professor of Sociology*

The relation of criminal law and criminology. Crime and delinquency, causes and control. Current correctional methods. The background and present state of penal methods and current organization of penal institutions. Modern methods of treatment and correction. Crime and delinquency in American society. The juvenile court; the criminal trial courts. Some problems.

Mon. through Fri., 11:45 A.M.–12:55 P.M.

COURSE SCHEDULE

INTERSESSION, June 11—June 30

Bio. —S.171	Ecology of Freshwater Algae	Webber	All Interession classes meet twice daily Monday through Friday at 9:00 A.M. and 2:00 P.M. with the exception of Soc. S.12a which meets at 10:00 A.M. and 2:00 P.M., and Fr. S.10 which meets at 8:00 A.M. and 2:00 P.M.
Ec. —S.211b	Comparative Economic Systems	Melder	
Eng. —S.11a	English Composition and Literature	Anderson	
Eng. —S.125	The Short Story	Carter	
Eng. —S.140	Modern Continental Fiction	Marchant	
F.A. —S.12	Introduction to Music	Fuller	
Fr. —S.10	Elementary French Refresher	Rubin	
Geol. —S.12b	Historical Geology	Bryers	
Gov. —S.143	Principles of International Relations	Abrash	
Hist. —S.231	American Colonial History	Merriam	
Psy. —S.172a	Theories of Personality	Baker	
Soc. —S.12a	Introduction to Cultural Anthropology	Vidich	

SUMMER SESSION, July 2—August 18

Bio. —S.11	Introductory Botany	Webber	9:15 A.M. and Labs.
Bio. —S.262	Instrumental Procedures in Biological Investigations	Rosenkrantz	8:00 A.M.
Bio. —S.300	Research in Biology	Staff	
*B.A. —S.16	Business Statistics	Hargest	9:15 A.M. and 2:00 P.M.
B.A. —S.17	Public Speaking	Beard	8:00 P.M.
B.A. —S.18	Corporation Finance	Bamford	10:30 A.M.
B.A. —S.109	Sales Management	Balko	8:00 P.M.
B.A. —S.132	Human Relations in Industry	Bamford	9:15 A.M.
B.A. —S.225b	Marketing Policies	Balko	6:00 P.M.
Ec. —S.13	Money and Banking	Onorato	10:30 A.M.
Ed. —S.22	Reading & Literature in the Upper Elementary & Lower Secondary Grades	Robinson	9:15 A.M. - beginning July 25 for 3 weeks
Ed. —S.263a	Methods & Materials in the Elementary School — Principles & Demonstration	Shepherd	9:15 A.M. - beginning July 2 for 3 weeks
Ed. —S.290b	Philosophy of Education	Beck	8:00 A.M.
Eng. —S.11b	English Composition & Literature	Schroeder	8:00 P.M.
Eng. —S.12	Public Speaking	Beard	8:00 P.M.
Eng. —S.106	Contemporary American Fiction	Beard	6:00 P.M.
Eng. —S.127	Modern Continental Drama	Schroeder	10:30 A.M.
F.A. —S.190	History of Art: Mannerisms to the Present	Murphey	6:00 P.M.
*Geo. —S.191	Cartography	Burnham	1:30 P.M.
Geo. —S.201b	Political Geography	Van Valkenburg	8:00 A.M.
Geo. —S.285a	Regional Geography of Europe	Van Valkenburg	10:30 A.M.
*Geo. —S.291	Cartography	Burnham	1:30 P.M.
Geo. —S.300	Research in Geography	Staff	
Geol. —S.12a	Physical Geology	Bryers	10:30 A.M.

* Double course, two classes daily through Summer Session.

Gov. —S.251a	American Political Parties	Cohen	8:00 A.M.
Hist. —S.16	The Cold War	Abrash	9:15 A.M.
Hist. —S.232	American Social History Since the Civil War	McKey	11:45 A.M.
Hist. —S.284	The Middle East in the 20th Century	Iatrides	6:00 P.M.
*Fr. —S.11	Elementary French	Instructor to be announced	9:15 A.M.; 2:00 P.M.
*Fr. —S.12	Intermediate French	Marchant	9:15 A.M.; 2:00 P.M.
*Ger. —S.11	Introductory German	Arndt	9:15 A.M.; 2:00 P.M.
*Ger. —S.12	Intermediate German	Edwards	9:15 A.M.; 2:00 P.M.
*Sp. —S.11	Introductory Spanish	Barbera	9:15 A.M.; 2:00 P.M.
*Sp. —S.12	Intermediate Spanish	Instructor to be announced	9:15 A.M.; 2:00 P.M.
*Math. —S.201	Fundamental Concepts of Mathematics	Bevelheimer	9:15 A.M.; 10:45 A.M.
*Math. —S.212	Introduction to Calculus	Frandsen	9:15 A.M.; 10:45 A.M.
Phil. —S.119	Basic Issues in Philosophy	Beck	9:15 A.M.
(Ed.) —S.290b	Philosophy of Education	Beck	8:00 A.M.
Psy. —S.11a	General Psychology	Instructor to be announced	9:15 A.M.
Psy. —S.103b	The Abnormal Personality	Baker	11:45 A.M.
Psy. —S.150a	Introduction to Child Psychology	Wohlwill	8:00 P.M.
Psy. —S.190	Industrial Psychology	Instructor to be announced	10:30 A.M.
Soc. —S.11b	Social Institutions	Killian	10:30 A.M.
Soc. —S.14	Crime, Delinquency & Society	Killian	11:45 A.M.

*Double course, two classes daily through Summer Session

Please send me a registration card for the 1962 Clark University Summer School so that I may preregister.

My academic status is:

College Graduate ☐ College Undergraduate ☐

Special Student ☐ Clark University Evening College ☐
(not a degree candidate)

I (have, have not) previously attended the Clark University Summer School.

NAME

ADDRESS

City Zone State

Return to

SUMMER SCHOOL OFFICE, CLARK UNIVERSITY,
950 MAIN STREET, WORCESTER, MASS.

INTERSESSION: JUNE 11-JUNE 30

Classes meet daily, Monday through Friday—9:00 to 10:10 A.M. and 2:00 to 3:10 P.M. (Except SOC.—S.12a) and FR.—S.10) —3 credits

Bio. S.171 Ecology of Freshwater Algae
Ec. S.211b Comparative Economic Systems
Eng. S.11a English Composition and Literature
Eng. S.125 The Short Story
Eng. S.140 Modern Continental Fiction
F.A. S.12 Introduction to Music
Fr. S.10 Elementary French Refresher

Geol. S.12b Historical Geology
Gov. S.143 Principles of International Relations
Hist. S.231 American Colonial History
Psy. S.172a Theories of Personality
Soc. S.12a Introduction to Cultural Anthropology

SUMMER SESSION: JULY 2-AUGUST 18

Morning Classes meet daily Monday through Friday—3 credits

8:00 Bio. S.262 Instrumental Procedures in Bio. Investigations
to Ed. S.290b Philosophy of Education
9:10 Geo. S.201b Political Geography
Gov. S.251a American Political Parties

9:15 Bio. S.11 Introductory Botany
to B.A. S.132 Human Relations in Industry
10:25 Ed. S.22 Reading & Lit. in Upper Elem. & Lower
Secondary Grades
Ed. S.263a Methods & Mat. in the Elem. School-Prin.
and Demonstrations
Hist. S.16 The Cold War
Phil. S.119 Basic Issues in Philosophy
Psy. S.11a General Psychology

B.A. S.18 Corporation Finance
Ec. S.13 Money and Banking
Eng. S.127 Modern Continental Drama
Geo. S.285a Regional Geography of Europe
S.12a Physical Geology
Geol. S.190 Industrial Psychology
Psy. S.11b Social Institutions
Soc. S.11b

Hist. S.232 American Social History Since the Civil War
to Psy. S.103b The Abnormal Personality
S.14 Crime, Delinquency and Society

Geo. S.191 Cartography
Geo. S.291 Cartography

Evening Classes meet Monday, Wednesday and Friday—3 credits

6:00 B.A. S.225b Marketing Policies
to Eng. S.106 Contemporary American Fiction
7:50 F.A. S.190 History of Art: Mannerisms to the Present
Hist. S.284 The Middle East in the 20th Century

8:00 B.A. S.17 Public Speaking
to B.A. S.109 Sales Management
9:50 Eng. S.11b English Composition and Lit.
Psy. S.150a Introduction to Child Psychology

TWICE DAILY COURSES

Two Class Meetings Monday through Friday

B.A. S.16 Business Statistics 9:15 & 2:00
Math. S.201 Fundamental Concepts 9:15 & 10:45
S.212 Intro. to Calculus 9:15 & 10:45
Fr. S.11 Elementary French 9:15 & 2:00
S.12 Inter. French 9:15 & 2:00
Ger. S.11 Intro. German 9:15 & 2:00
S.12 Inter. German 9:15 & 2:00
Sp. S.11 Intro. Spanish 9:15 & 2:00
S.12 Inter. Spanish 9:15 & 2:00



CLARK UNIVERSITY
SEVENTY-THIRD
ANNUAL COMMENCEMENT
CAMPUS GREEN
SUNDAY, JUNE 9, 1963
WORCESTER, MASSACHUSETTS



ORDER OF EXERCISES

Prelude

The Musical Clocks

Franz J. Haydn

Processional

Theodore DuBois

Invocation

THE REVEREND FERDINAND J. LOUNGWAY
*Minister, First Parish Church,
Sterling, Massachusetts*

Welcome by the President

DR. HOWARD B. JEFFERSON

Commencement Address

THE HONORABLE CHARLES E. WYZANSKI, JR.
*Judge, U.S. District Court
for Massachusetts*

Conferring of Degrees

Alma Mater

Fiat Lux (Stanzas I and III)

Benediction

THE REVEREND MR. LOUNGWAY

Recessional

Sigfried Karg-Elert

Organist: Henry Hokans

EVENING COLLEGE CANDIDATES FOR THE DEGREE OF
BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION

William Francis Blondin
Porter Stevens Dickinson
Edward Paul Dudek
Cyril E. Jemson
John Charles Kissel

Ronald Paul Luoma
Henry Myron Milewski
Berenice Macalister Paciello
Irving Pilson
John Samuel Toppin

Albert Harvey Webber

EVENING COLLEGE CANDIDATES FOR THE DEGREE OF
BACHELOR OF SCIENCE IN GENERAL STUDIES

Carl Eric Andersen
Robert Charles Avakian
James William Birch
Joyce Helene Bissell
*Gertrude Elizabeth Farnum
Edwin Albert Heckman
Richard Sydney Johnson
Kurt Koppetsch

*Albert Peter MacKoul
*Richard Anthony O'Connor
†David Livingston Orrell
Paul Edward Rogers
John Joseph Rose
Paul Edward Rudman
Norman Baker Stanikmas
Robert C. Wilson

Kenneth Earl Young

EVENING COLLEGE CANDIDATE FOR THE DEGREE OF
BACHELOR OF SCIENCE IN GENERAL STUDIES WITH HONORS

Summa Cum Laude

Joan Patrice Donoghue

CANDIDATE FOR THE DEGREE OF BACHELOR OF
BUSINESS ADMINISTRATION

Ronald Goff Lefebvre

CANDIDATES FOR THE DEGREE OF BACHELOR OF SCIENCE
IN BUSINESS ADMINISTRATION

Robert John Beaulieu
Edward Benecchi, Jr.
Gilliat Schroeder Burnham
Walter Banis Einstein
*Charles Henry Greene, Jr.
Arthur Thomas Innamorati, Jr.
Gaetano Vincent Lapriore

*Byron Russell Law
Jeffrey Lehmann
Peter Vernon Marsden
Richard Gilbert McAnern
Michael Shutowick, Jr.
*Norman Carl Swenson
Robert Donald Zarzynski

†As of June 11, 1961

*As of June 10, 1962

CANDIDATES FOR THE DEGREE OF BACHELOR OF SCIENCE
IN BUSINESS ADMINISTRATION WITH HONORS

Departmental Honors

Thain Chipman Allan, *Accounting*
Robert Bartels, *Economics*
Allen Michael Glick, *Marketing*
Richard Harry Grusell, *Accounting*
Gordon William MacPhee, *Accounting*
Bruce Samuel Rafey, *Marketing*

Summa Cum Laude

Aaron Haskell Siegal

CANDIDATES FOR THE DEGREE OF BACHELOR OF ARTS

Dorothy Rollins Anderson	Richard Butler Gelpke
Nancy Mary Baum	Charles Kelso Gleason
Harold William Bentley	*Paul Robert Goldschmidt
Lawrence Israel Berenson	*Joyce Frances Goulart
*John Joseph Bianchi	*Ronald Elliot Gouron
Hans August Bierlmaier	Jon Allen Green
Raymond Hensel Boadway	Lois Carol Grundfast
Richard Joseph Bolan	Alan Gus Hamburger
Michael Ryley Bradbury	Janet Hannine Harris
*John Joseph Brasch	Robert Paul Hedlund
Alfreda Mary Brousseau	Ross Elliott Heller
George Bulat	Joanne Vi Herson
Carol Marie Casa	Leonard J. Jacobs
*Angelo Anthony Casso	Harriet Claudia Jacobson
Stanley Harvey Chase	Frederick Smith Jealous
Stephen Thomas Cheston	Bruce Gary Jed
*John Connelly, Jr.	Andrew Kagan
Robert Donald Conway	Albert Julian Kavanagh
Homer Calvin Cook, Jr.	*Elisabeth Nora Keil
Nancy Borowick Corkum	Richard Paul Kiley
Carol Eleanor Cross	Stephen Barry Kongieser
Ruth Dukes Cupka	*Janet Emilia Lacerda
Sherwood Sonny Danoff	Eugene Paul Lacerte
Cynthia Davis	David Justin Latham
Susan Davis	Elisabeth Wilcox Lawson
*Benedetto Del Duca	Michael Lefferts
David James DeRita	Sandra Louise Lumb
Edward Paul Dworkin	McDonald Mhlanga Major
Allan Ephraim	Iris Grace Mardirosian
Elaine Casdin Feingold	David Wilson Marsland
Richard Stanley Fitts	Joel Henry Meshorer
Mary Anne Flory	Nancy Harriet Miller
Dianne Elizabeth Forrester	Steffa Joy Mirel
Stuart Ronald Freedman	*Robert Earl Mooney, Jr.
*Maria Louise Frese	Michele Ann Neubauer
Richard Friedenthal	Patricia Ann Norelli
Wendell Whitney Frye	Ellen Craig Espie Olsen

*As of June 10, 1962

Dena May Phelps
Marilyn Lois Potash
*Geoffrey Aloysius Powers, III
*David John Ranch
Dorothy Ann Repaci
Alan Whittier Rickheit
*Rebecca Robinson
Alice Faye Rosenbluth
Charles Elliott Rounds, Jr.
Helge Leigh Rován
Lawrence Seymour Ruch
Virginia Wade Ryan
Sallie Robinson Samia
James Richard Scrimgeour
Marie Louise Scruggs
Jean Alma Senger
Wayne Richard Sentence
Diana Antoinette Shaloviejus
*Susan Thompson Shearer
Nathaniel Niles Shipton
Allan Michael Short
Joel Leon Sidel

Richard Paul Silver
Jare Edward Simonian
*Arthur Spiegelman
Judith Ellen Steinberg
Anthony Francis Stepanski, Jr.
Lucinda Waite Stockwell
Sang Yong Suh
Rosalyn Carol Suna
Conrad Marshall Swartz
William Gordon Swift
James Frederick Tetzlaff
Lynda Evelyn Thistleton
Alfreda Amelia Toczko
Irene Harwood Tunstall
Mirrless Ruth Underwood
*Edward Harold Ungerleider
Diane St. Jean Walker
Lois Sergent Wallenfels
Teresa Welch
David Philip Wellwood
Rebecca Lillian Wholey
Elsie-Marie Zajac

CANDIDATES FOR THE DEGREE OF BACHELOR OF ARTS WITH HONORS

Departmental Honors

David Martin Bass, *Biology*
Herbert Leonard Blitzer, *Physics*
Duncan Lynn Clarke, *International Relations*
James Peter Coyle, *Philosophy*
George Alfred Dunkley, *French*
Robert Allen Ferris, *Geography*
Lewis Robert Goldfrank, *Chemistry*
Andrew Grossman, *Economics*
Stephen Neil Hollman, *Economics*
Armand David Joseph Hufault, Jr., *Physics*
David Arthur Jaffee, *High Honors in History*
Arnold Gustav Konheim, *Physics*
Norman Leslie Rosin, *Chemistry*
Francis Henry Ruddy, *Chemistry*
Mark Lionel Solovay, *Biology*
Michael Allen Stillman, *Chemistry*
Avis Marion Taylor, *Geography*
William Ingraham Thompson, III, *Physics*

*As of June 10, 1962

Cum Laude

Karen Andrea Anderson, *and with Honors in Biology*
Eugenia Aldona Cesna
Zabelle Garabedian, *and with Honors in French*
Fenwick Reed Hainsworth, *and with Honors in Biology*
Steven Leon Hurwitz
Karen Louise Kaufman
* Arthur Henry Martin, *and with High Honors in English*
* Timothy McCarthy, *and with Highest Honors in International Relations*
Sheila Ann McNicholas
* Robert Francis Miles, Jr.
Richard Lee Pearlman, *and with Highest Honors in Psychology*
Robert Jerome Pellegrini, *and with High Honors in Psychology*
Elsa Cecile Raab, *and with Honors in Philosophy*
Richard Charles Ragaini, *and with High Honors in Chemistry*
Nan Willa Rothenberg
Margaret Swierz

Magna Cum Laude

Lester Barry Jacobson, *and with Highest Honors in Chemistry*
Keith Ian Polakoff
Martin David Schneiderman, *and with High Honors in Government*
Elaine Jocelyn Weinreb, *and with Honors in Psychology*
Mark Philip Widoff, *and with High Honors in History*

CANDIDATES FOR THE DEGREE OF MASTER OF ARTS IN EDUCATION

Elmer Philip Ballard	Doris Ruth Ljungberg
Carol Marie Brugman	Nancy Marie Lonnroth
Alan Davis Buckley	Paul Robert Lussier
Thomas Michael Dolan	Judith Ann Pearlman
George Paul Doring	Janet Mary Richards
Herman Parker Fisher	William Elliot Topkin
Beatrice Gould Green	Chester Francis Wolochowicz
Signe-Maria Kallio	Lennie Nell Yamashiro

CANDIDATES FOR THE DEGREE OF MASTER OF ARTS

Biology

Marcus John Farrell
Arthur Barry Krupnick
Joseph Rene Paul Tasse

Chemistry

Uh Hee Kim
Cho Lu Sia

Economics and Sociology

Donald John Aharonian
Eugene Henry Hahn
Hsi-Cheng Li
Hoshiar Singh Malik
Caroline Ann Murphy
Barry Kent Rogstad
Anthony Philip Thirlwall

Geography

William Rule Anderson
Farouk Mohammed Mohammed El
Gammal
John Lier
Ronald Melvin McCall
Mesfin Wolde Mariam
Richard Joseph Pike, Jr.
Carolyn Jean Ryan
Barbara Tubman Saydam
Harley Earle Scott
Frank Joseph Sparicio
Reed Francis Stewart
David Eugene Vincent
Stephen Olin Wilson

**History, Government, and
International Relations**

Jane Antoun
Harriette Levy Chandler
James Lawson Conrad, Jr.
Bernard Goldsmith
Tae-Hwan Kwak
Mary Jane Murray
John Edward Santosuosso
Richard Walter Ward
Jae-Choong Woo

Mathematics

Peter Robert Christopher

Psychology

Elizabeth Jane Williams Bauermeister
Shannon Theobald Devoe
Jean Freilicher
Barbara Klein
Warren Tadgell White

CANDIDATES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY**Chemistry**

Henry Leo Jakubauskas
Hyoungman Kim
Victor Emil Noshkin, Jr.

Gertrude McKean Reith
Charles Broadwell Varney

Geography

Mildred Berman
David Dallin Brodeur
Donald William Griffin
Sister Marion Lyons

Psychology

Sandor Barry Brent
Donald Marvin Isaac
Stanley David Klein
Laurence Cortelyou Smith, Jr.
Samuel Edward Stayton

CONFERRING OF HONORARY DEGREES

BEN HAIG BAGDIKIAN

Doctor of Letters

Presented by Henry Donaldson Jordan

SIDNEY STEVENS NEGUS (*Deceased, May 17, 1963*)

Doctor of Science

Presented by Thomas Tamotsu Sugihara

HAROLD LADD PLUMLEY

Doctor of Laws

Presented by James Ackley Maxwell

CHARLES EDWARD WYZANSKI, JR.

Doctor of Laws

Presented by Sherman Strong Hayden

FIAT LUX

Words by
E. L. Clarke, '09

Music by
R. F. Fletcher, '10

Oh Clark! Thy sons have gathered
To thee from east and west,
To pledge with deep devotion
The college they love best.
They love thy halls and campus,
Each comrade of their heart
The memories, aims, traditions
That make thee what thou art.

Hail Clark! We who revere thee
Salute thee with a cheer!
While we shall live we'll praise thee.
Oh college without peer!
Only with life shall perish
Thy name and memory bright,
Thy sons shall ever cherish
The scarlet and the white!

Godspeed our Alma Mater,
And may she ever be
The leader of the leaders,
The freest of the free!
Her sons shall still press onward,
The foremost in the fight,
Till everywhere her watchword
Shall ring, "Let there be light!"

CLARK UNIVERSITY

1963

SUMMER SCHOOL

Intersession

June 10 to June 29

Summer Session

July 1 to August 17

CALENDAR

JUNE

- 10 Monday, Intersession Registration 9-12 noon
First class meeting 2 P.M.
- 26 Wednesday, Registration for evening classes
- 29 Saturday, Examinations for Intersession courses, 9-12 noon

JULY

- 1 Monday, Summer Session Registration for day classes 9-12 noon
Evening classes begin 6 P.M.
- 2 Tuesday, Day classes begin 8 A.M.
- 4 Thursday, Independence Day—a holiday
- 23 Tuesday, Examinations in double courses concluding after first three weeks
- 24 Wednesday, Beginning of double courses of second three weeks

AUGUST

- 14 Wednesday, No day classes
Examinations for evening classes meeting at 6 P.M.—7 to 10 P.M.
- 15 Thursday, Examinations for classes meeting at 8 A.M.—9 to 12 noon
- 16 Friday, Examinations for classes meeting at 9:15 A.M.—9 to 12 noon
for evening classes meeting at 8 P.M.—7 to 10 P.M.
- 17 Saturday, Examinations for classes meeting at 10:30 A.M.—9 to 12 noon
for classes meeting at 11:45 A.M.—2 to 5 P.M.

1963

JUNE

S	M	T	W	T	F	S
..	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30

JULY

S	M	T	W	T	F	S
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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31

AUGUST

S	M	T	W	T	F	S
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4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Clark University
SUMMER SCHOOL

Worcester, Massachusetts

Intersession, June 10 to June 29
Summer Session, July 1 to August 17

1963

A Unique Opportunity to Learn

Small groups of students working in courses they enjoy typify the educational opportunity offered by the Clark University Summer School. Superior teaching and interested students combine to make for effective learning. Active participation by the students in class discussions is encouraged.

Courses are available in the arts and sciences at both the graduate and undergraduate level, permitting students to accelerate their work toward a degree. In addition, the selection of courses in the modern languages permits current and prospective graduate students to better prepare themselves for graduate study.

There is a variety of courses available for teachers who seek professional advancement. The selection of subject matter courses is excellent, and several education courses will be offered.

Evening classes in liberal arts and business will be offered for those who have part time summer jobs during the day and wish to gain academic credit at the same time, as well as for those who are continuing their studies in the Clark University Evening College.

Clark University has an excellent library employing the open shelf system with an opportunity for unlimited browsing of the large and varied collection of modern books, professional periodicals and an unusually large map collection.

Clark is ideally located for summer study. The summer climate is excellent and the University is near numerous cultural and recreational facilities. Trips to Tanglewood, to ball games in Boston, and swimming in the nearby ponds have been very popular. The fine tennis courts will be available for use by Summer School students.

SPECIAL PROGRAM

HISTORY S. 336 INTERPRETING THE AMERICAN PAST

Robert F. Campbell, *Dean of the College and Professor of American History*

Henry C. Borger, Jr., *Dean of Students and Professor of Education*

George A. Billias, *Associate Professor of American History*

Gerald N. Grob, *Associate Professor of American History*

An intensive institute for secondary school history and social studies teachers co-sponsored by the Service Center for Teachers of History of the American Historical Association. Selected topics in American history will be analyzed and discussed with special attention to new viewpoints and recent interpretations. The Institute will run from June 24 to July 12 and will carry three semester hours credit. It will be given at the Conference Center and there will be two meetings each day, 8:30 A.M. and 3:00 P.M.

DEGREES AND CREDITS

All courses offered are accepted at Clark for credit toward the degrees of Bachelor of Arts and Bachelor of Science in Business Administration, or either of the Evening College degrees unless specifically limited to one of the degrees as stated in the course description. Many courses in the Summer School count toward the degrees of Master of Arts, Master of Arts in Education, and Doctor of Philosophy. Approval should, however, be obtained in advance from a student's major department.

The degree of Master of Arts may be obtained in certain fields by completing satisfactorily a full-time program for five summers. It is best for students interested in such a program to discuss their plans directly with the Chairman of the department concerned. Graduate students formally registered in the Summer School may, with the approval of their major department, enroll in thesis courses under the direction of regular members of the staff other than those listed in the Summer School Bulletin.

Each single course offered in the Summer School is equivalent to a half-year course of the academic year and yields three semester hours of credit. The double courses in the languages, statistics and mathematics which meet for two lecture periods a day for six and one-half weeks are equivalent to year courses (six semester hours credit).

Intersession courses meet for two 70 minute periods at 9:00 A.M. and at 2:00 P.M., Monday through Friday. Summer Session courses during the day meet for one 70 minute period Monday through Friday. Double courses meet for two 70 minute periods five days a week. Evening classes meet for 110 minutes on Monday, Wednesday and Friday evenings. Exceptions to the above time schedule are listed under course descriptions.

A student may carry in a normal program one course in the Intersession (three semester hours) and two courses in the Summer Session (six semester hours). Permission to carry an additional course may be granted only in exceptional cases if approved in writing prior to regis-

tration. Course changes after the third day of classes must be approved by the Director.

One transcript of a student's Summer School record is available free of charge, and application for it should be made in the Summer School office. There is a \$1.00 fee for each additional transcript.

TUITION AND FEES

A matriculation fee of \$5.00 is required of all students entering Clark University for the first time. The tuition for each three semester hour course is \$105.00. Persons who wish to audit a course without receiving credit register and pay tuition at the stated rate. However, students taking two courses for credit during the Summer Session may audit a third course without additional cost. Tuition and fees must be paid in the Summer School Office immediately following registration. A fee for late registration of \$3.00 must be paid by students who fail to complete registration within the official Registration Period.

WITHDRAWALS AND REFUNDS

Students who withdraw with the approval of the Director of the Summer School may expect a refund of tuition paid in full on the following schedule:

Intersession

June 10, 11	full refund
June 12, 13	two-thirds
June 14	one-third

Summer Session

July 1, 2, 3, 5	full refund
July 8, 9, 10	two-thirds
July 11, 12,	one-third

LIVING FACILITIES AND COSTS

Rooms will be available for both men and women in the new University dormitories but reservations should be made promptly on or before June 1. Room rent is \$10.00 per week for single room occupancy and \$7.50 for double. A room and key deposit of \$10.00 is required in advance to hold a room. This deposit is not part-payment for the rent. The \$10.00 will be returned in full if the room is undamaged when the key is returned.

FOOD SERVICE INFORMATION

Clark University will offer lunch facilities in the Snack-Bar, Jefferson Hall. Sandwiches, desserts and beverages are on sale Monday through Friday from 11:30 A.M. to 2:00 P.M. beginning June 10 through August 17.

VETERANS

Veterans attending the 1963 Summer School should present their supplemental Certificate of Eligibility at the Bursar's Office not later than Friday of the first full week of the term. The Director of the Summer School should be consulted when unusual or unexpected situations arise.

Veterans are reminded that Certificates of Eligibility held during the Spring Semester 1963 do not apply to the Summer School and that a new application must be completed for the course of summer study.

ELIGIBILITY FOR COURSES

Courses beginning with "1" are open to all undergraduates except freshmen. Courses preceded by an "F" are open to freshmen. Courses beginning with "2" are open to advanced undergraduates and graduate students. Teachers working toward degrees or credits in Education should consult with Professor Vernon Jones, Chairman of the Department of Education.

ADMINISTRATIVE OFFICERS OF THE UNIVERSITY

Howard B. Jefferson, *President*

Robert M. Hyde, *Executive Vice President*

Robert F. Campbell, *Dean of the College*

Thomas J. Dolphin, *Director of the Summer School*

SUMMER SCHOOL STAFF

(All are members of the Clark University Faculty unless otherwise indicated)

Karl O. E. Anderson, Ph.D., *Professor of English*

Robert W. Baker, Ph.D., *Associate Professor of Psychology*

George A. Balko, Jr., M.B.A., *Assistant Professor of Business Administration*

Frederick E. Bamford, M.B.A., *Assistant Professor of Economics and Business Administration*

Raymond E. Barbera, Ph.D., *Associate Professor of Romance Languages*

James F. Beard, Ph.D., *Professor of English*
 Robert N. Beck, Ph.D., *Professor of Philosophy*
 George A. Billias, Ph.D., *Associate Professor of American History*
 J. William Birch, Ph.D., *Professor of Geography*
 Charles S. Blinderman, Ph.D., *Associate Professor of English*
 Daniel R. Borg, A.M., *Instructor in History*
 Henry C. Borger, Jr., Ph.D., *Associate Professor of Education*
 Wesley E. Bryers, A.B., *Instructor in Geology*
 Guy H. Burnham, A.M., *Instructor in Geography and Cartography*
 Robert F. Campbell, Ph.D., *Dean of the College and Professor of American*

History

William H. Carter, Jr., Ph.D., *Associate Professor of English*
 Samuel P. Cowardin, III., A.M., *Assistant Professor of Fine Arts*
 Walter H. Crockett, Ph.D., *Associate Professor of Psychology*
 James S. Edwards, M.A., *Associate Professor of German*
 Gerald N. Grob, Ph.D., *Associate Professor of American History*
 George E. Hargest, M.B.A., *Associate Professor of Economics and Business*

Administration

Ian P. Howard, *Visiting Lecturer, University of Durham, Durham, England*
 Vernon Jones, Ph.D., *Professor of Educational Psychology*
 Bernard Kaplan, Ph.D., *Associate Professor of Psychology*
 Frederick W. Killian, LL.B., *Associate Professor of Sociology*
 Richard H. McKey, Jr., Ph.D., *Visiting Lecturer in History, Worcester*

Polytechnic Institute

F. Eugene Melder, Ph.D., *Professor of Economics*
 George H. Merriam, Ph.D., *Director of Admissions, Lecturer in History*
 John T. Murphey, B.S., *Visiting Lecturer, Museum Instructor, Worcester*

Art Museum

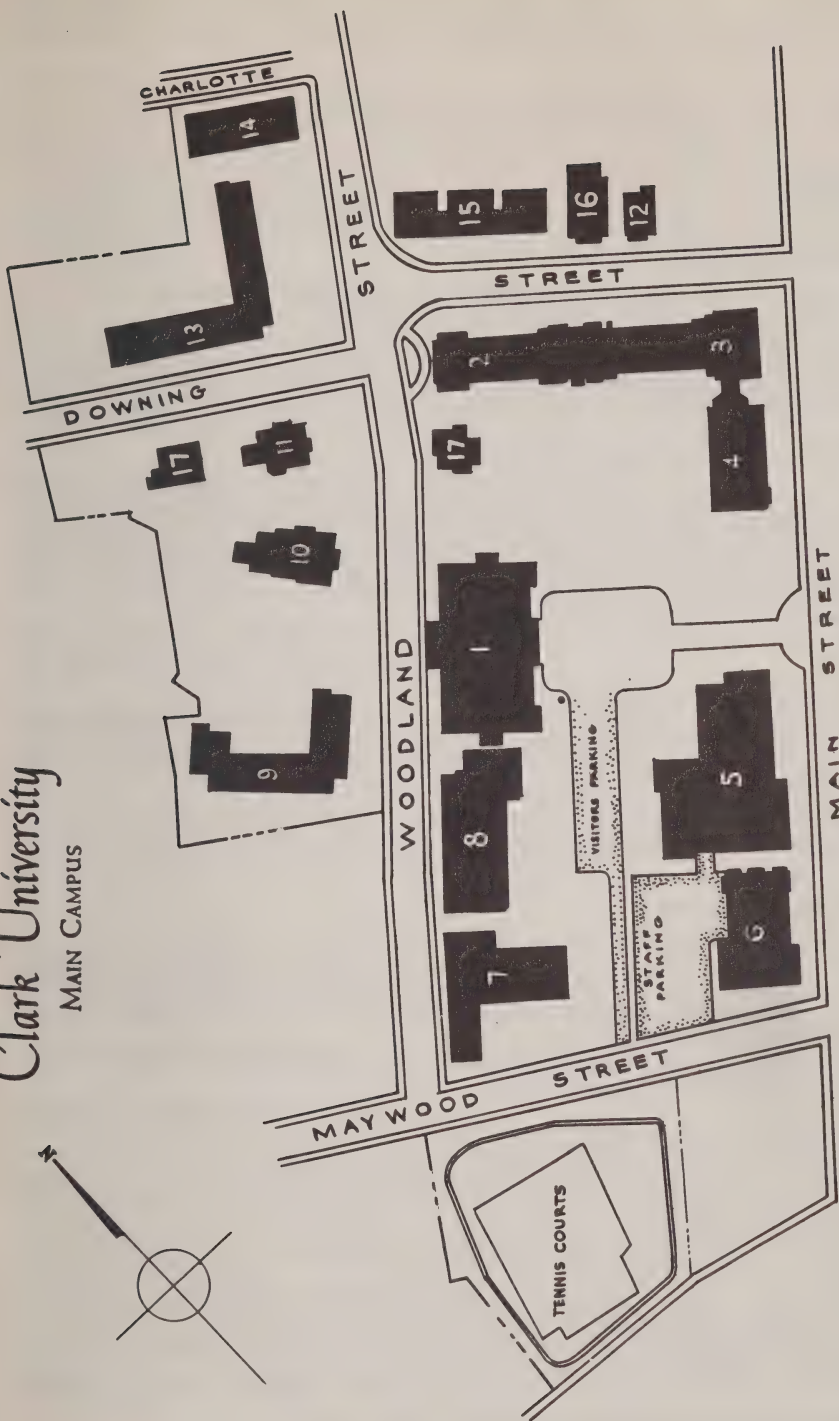
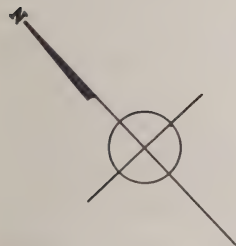
Raymond E. Murphy, Ph.D., *Professor of Economic Geography*
 Sven Nilsson, Fil., Lic., *Visiting Lecturer, University of Upsala, Upsala, Sweden*

Roger C. Norton, Ph.D., *Visiting Lecturer, Cedar Crest College, Allentown, Pa.*

Philip G. Olson, Ph.D., *Assistant Professor of Sociology*
 Relly Raffman, A.M., *Associate Professor of Music*
 Mordecai Rubin, Ph.D., *Assistant Professor of Romance Languages*
 Dayton D. Shepherd, M.A., *Lecturer in Education*
 Stanley Sultan, Ph.D., *Associate Professor of English*
 Roger C. Van Tassel, Ph.D., *Associate Professor of Economics*
 Jefferson A. White, M.A., *Assistant Professor of Philosophy*

Clark University

MAIN CAMPUS



- | | | |
|----------------------|--------------------------|------------------------|
| 10 CAMPUS DIRECTORY | 12 FACULTY HOME | 15 INFIRMARY |
| 11 JONES CLARK HALL | 13 MEN'S DORMITORY | 16 UNIVERSITY BUILDING |
| 12 LATWOOD HALL | 14 ESTABROOK HALL | |
| 13 LIBRARY | 15 UNIVERSITY APARTMENTS | |
| | | |
| 4 GEOGRAPHY BUILDING | 8 JEFFERSON LABORATORY | |
| 5 STUDENT UNION | 9 WOMEN'S DORMITORY | |
| 6 ALUMNI SYMPOSIUM | 10 PRESIDENT'S HOME | |
| 7 PHYSICS | 11 DEAN'S HOME | |

COURSE OFFERINGS

Biology

SUMMER SESSION

F.—BIO.—S.11a GENERAL BIOLOGY—THE PLANT KINGDOM, ESPECIALLY IN ITS RELATION TO MAN

Sven Nilsson, *Fil. Lic., University of Upsala, Upsala, Sweden*

Introduction to the fundamentals of botany; interrelationships between plants, animals and man; distribution, economic uses of plants. Fieldwork and Lectures.

Laboratory fee: \$10.00

Lecture: Mon. through Fri., 10:30-11:40 A.M.

Laboratory: Tues. and Thurs., 1:30-4:30 P.M.

F.—BIO.—S.17 GENERAL ECOLOGY

Sven Nilsson, *Fil. Lic., University of Upsala, Upsala, Sweden*

An introductory study of the distribution of plants and animals, their interrelationships and adaptations to such a wide variety of environments as the seashore, sand dunes, woodlands, lakes and streams. Shorter field trips to Mt. Monadnock, the virgin forest at Bradford, N.H., the North Shore, and the Barnstable Dunes on Cape Cod will be taken. Some field work at a fresh-water lake will also be undertaken. Previous courses in Biology are helpful but not required.

Laboratory fee: \$10.00

Lecture: Mon. through Fri., 11:45 A.M.-12:55 P.M.

Laboratory: Two afternoons to be arranged.

BIO.—S.300 RESEARCH IN BIOLOGY

Graduate research studies may be carried out under the direction of available staff members during the Summer School. The course is primarily for those who have been previously enrolled in the Graduate School. Approval by the staff member will be required prior to admission.

Business Administration

SUMMER SESSION

*B.A.—S.16 BUSINESS STATISTICS

George E. Hargest, *Associate Professor of Business Administration*

This course is designed to give the student a knowledge of the basic statistical techniques and procedures as they are applied to business and economic data. Lectures and laboratory exercises.

Mon. through Fri., 9:15-10:25 A.M. and 2:00-3:10 P.M.

F.—B.A.—S.17 PUBLIC SPEAKING

James F. Beard, *Professor of English*

For course description see section on English.

(Candidates for the B.S. in B.A. degree should use course No. B.A.—S.17; candidates for the A.B. degree should use the course No. Eng.—S.12.)

Mon., Wed. and Fri., 8:00-9:50 P.M.

B.A.—S.18 CORPORATION FINANCE

Frederick E. Bamford, *Assistant Professor of Economics and
Business Administration*

A study of the financial structure of modern industry with emphasis on the nature of the business corporation, its financial practices, types of securities, capital structure, financial reorganization, and the problems of internal financial control. The case method will be employed.

Mon. through Fri., 10:30-11:40 A.M.

* Double course, two classes daily through Summer Session.

B.A.—S.109 SALES MANAGEMENTGeorge A. Balko, Jr., *Assistant Professor of Business Administration*

An examination of the problems of organizing and directing the efforts of a sales force. This involves the establishment of a sales plan, the place of the sales department in the company, the formulation of sales policies, and the organization of the sales department; recruiting, training, equipping, motivating, compensating and measuring performance of salesmen. (This course may not be counted toward the A.B. degree, but only toward a business degree.)

Mon., Wed. and Fri., 8:00-9:50 P.M.

B.A.—S.132 HUMAN RELATIONS IN INDUSTRYFrederick E. Bamford, *Assistant Professor of Economics and Business Administration*

The work consists of the analysis of concrete cases involving the handling of human situations at all levels of activity. Study centers around the development of understanding of the psychological, sociological and economic factors of motivation in industry.

Mon. through Fri., 9:15-10:25 A.M.

B.A.—S.152b ADVERTISING MANAGEMENTGeorge A. Balko, Jr., *Assistant Professor of Business Administration*

Advertising as a tool of marketing, economic functions of advertising, advertising research, media selection, advertising organizations and testing

Mon., Wed., and Fri., 6:00-8:50 P.M.

Economics**INTERSESSION****EC.—S.11a PRINCIPLES OF ECONOMICS**Roger C. Van Tassel, *Associate Professor of Economics*

The first half of an introduction to economic principles, together with a study of the practical application of these principles to problems of the American economy. The second half will be given during the Summer Session.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

SUMMER SESSION**EC.—S.11b PRINCIPLES OF ECONOMICS****JAMES W. WIGHTMAN***Instructor to be announced*

The second half of the Principles of Economics course, begun in the Interession.

Mon. through Fri., 8:00-9:10 A.M.

EC.—S.140b CONSUMER ECONOMICSF. Eugene Melder, *Professor of Economics*

Consumers' roles in a market economy and their problems arising in the purchase of the customary goods and services. Emphasis is upon housing, insurance, savings, investments, consumer services supplied by advertisers, private noncommercial agencies, the government, and the cooperative movement.

Mon. through Fri., 9:15-10:25 A.M.

EC.—S.211b COMPARATIVE ECONOMIC SYSTEMSF. Eugene Melder, *Professor of Economics*

A comparative analysis of economic systems such as capitalism, socialism, and fascism followed by a consideration of these systems as currently or recently found to exist in specific nations.

Mon. through Fri., 11:45-12:55 P.M.

Education*

SUMMER SESSION

ED.—S.202 EDUCATIONAL PSYCHOLOGY

Vernon Jones, *Professor of Educational Psychology*

Principles of learning and development of children and youth, with special reference to educational achievement and to personal and social adjustment controls.

Mon. through Fri., 11:45 A.M.-12:55 P.M.

ED.—S.207 USE OF AUDIO-VISUAL MATERIALS IN TEACHING

Henry C. Borger, Jr., *Associate Professor of Education*

A survey of principles and practices in the use of visual and auditory materials and community resources in teaching. Student laboratory sessions will supplement the instructor's demonstrations of materials and equipment. Practical applications of theory will be emphasized.

Mon., Wed. and Fri., 6:00-7:50 P.M.

ED.—S.229 TESTS AND EVALUATION IN TEACHING AND GUIDANCE

Vernon Jones, *Professor of Educational Psychology*

Some of the basic principles and practices of diagnosis and measurements for teachers and guidance counselors. Problems from members of the class will receive special consideration.

Tues. and Thurs., 6:00-8:45 P.M.

ED.—S.263a METHODS AND MATERIALS IN THE ELEMENTARY SCHOOL—PRINCIPLES AND DEMONSTRATIONS

Dayton D. Shepherd, *Lecturer in Education*

A course in which modern methods and materials in teaching will be demonstrated with a class of children in the middle grades. A study will be made of the basic principles of teaching with particular emphasis in the social studies and language arts in the elementary school and the correlation of these subjects with other fields. Demonstration will be given in classroom grouping and methods of management, showing the provision for individual differences in teaching and the development of effectiveness independent study. Double period for 3 weeks, July 1-23, 3 semester hours credit.

Mon. through Fri., 9:15-10:25 A.M.

INTERSESSION

ED.—S.290b PHILOSOPHY OF EDUCATION

Robert N. Beck, *Professor of Philosophy*

The aims, processes and materials of education with special reference to the influence of philosophical ideas on educational problems. Extra work required for graduate credit.

Mon. through Fri., 3:45-5:45 P.M.

(HIST.)—S.336 INTERPRETING THE AMERICAN PAST

See description under History or Special Program.

English

SUMMER SESSION

F.—ENG.—S.11b ENGLISH COMPOSITION AND LITERATURE

Stanley Sultan, *Associate Professor of English*

This second half of the year course aims to continue the development of correctness and clarity in the student's writing, and to help him develop sound critical principles in evaluating poetry.

Mon., Wed. and Fri., 6:00-7:50 P.M.

* Students in Education are encouraged to elect work in the fields in which they plan to teach.

F.—ENG.—S.12 PUBLIC SPEAKING

James F. Beard, *Professor of English*

A course in the fundamentals of public speaking, emphasizing both the composition and delivery of the most common types of speeches, such as introductory, expository, and impromptu speeches. Special attention will be given to problems of human relations, voice tests, vocabulary development, and the acquisition of self-confidence, poise, and effective communication techniques. Practice speeches, conference, and voice recordings to enable the student to recognize and correct his speech deficiencies. (Candidates for the B.S. in B.A. degree should use course No. B.A.—S.17; candidates for the A.B. degree should use the course no. Eng.—S.12.)

Mon., Wed. and Fri., 8:00–9:50 P.M.

INTERSESSION

ENG.—S. 103 THE COMIC SPIRIT IN ENGLISH AND AMERICAN LITERATURE

William H. Carter, Jr., *Associate Professor of English*

The Comic Spirit will be studied in selected poems, plays, novels, short stories, and essays from Geoffrey Chaucer (in Modern English) to twentieth century writers such as G. B. Shaw, Evelyn Waugh, and James Thurber.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

SUMMER SESSION

ENG.—S.106 CONTEMPORARY AMERICAN FICTION

James F. Beard, *Professor of English*

A critical introduction to the best American fiction since about 1900, with emphasis on its esthetic values, sociological insights, and philosophic implications. Authors read and discussed will include Henry James, Theodore Dreiser, F. Scott Fitzgerald, Sherwood Anderson, Ernest Hemingway, William Faulkner, and others.

Mon., Wed. and Fri., 6:00–7:50 P.M.

INTERSESSION

ENG.—S.113 SHAKESPEARE

Karl O. E. Anderson, *Professor of English*

A study of ten major plays (comedies, histories, and tragedies), aimed to bring out the development of Shakespeare as a dramatist and to trace the changes in his attitude towards life. The plays to be read are *Romeo and Juliet*, *As You Like it*, *Richard II*, *Henry IV, Part I*, *Julius Caesar*, *Hamlet*, *Lear*, *Othello*, *Macbeth*, and *Winter's Tale*.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

SUMMER SESSION

ENG.—S.146b MODERN BRITISH AND AMERICAN DRAMA

Stanley Sultan, *Associate Professor of English*

This course includes plays by Oscar Wilde, G. B. Shaw, J. M. Synge, W. B. Yeats, Eugene O'Neill, Thornton Wilder, T. S. Eliot, Arthur Miller, Tennessee Williams, and others, and considers the relationship between modern English drama and such influential European playwrights of the turn of the century as Ibsen, Chekhov, and Strindberg.

Mon. through Fri., 9:15–10:25 A.M.

ENG.—S.145 DARWINISM

Charles S. Blinderman, *Associate Professor of English*

The course will be devoted to an analysis of the scientific, philosophical, religious, and social aspects of Darwinism, and to a study of literary works which dramatize these aspects.

Mon., Wed. and Fri., 6:00—7:50 P.M.

ENG.—S.150 LITERATURE OF WESTERN CIVILIZATION

Charles S. Blinderman, *Associate Professor of English*

A study of literature basic to the cultural development of western civilization; selections will range in subject from mythology to political science, in type from the epic poem to the essay, and in time from Greek antiquity to the Renaissance.

Mon. through Fri., 8:00—9:10 A.M.

Fine Arts

INTERSESSION

F.A.—S.12 INTRODUCTION TO MUSIC

Relly Raffman, *Associate Professor of Music*

What to listen for in Music. Designed for the student with no previous musical training or experience, it will deal with the basic theoretical elements and materials of music.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

F.A.—S.15 THE ART OF THE HIGH RENAISSANCE IN ITALY

Samuel P. Cowardin, III, *Assistant Professor of Fine Arts*

After a brief review of the early phase of the Renaissance, the course will concentrate upon important works of architecture, sculpture, and painting by the principal artists of the sixteenth century—Michelangelo, Raphael, Titian, and others. It will conclude with a consideration of Mannerism. Original works of the period will be studied in the museums in the vicinity of Worcester.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

SUMMER SESSION

F.A.—S.195 INTRODUCTION TO CONTEMPORARY ART

John T. Murphey, *Museum Instructor, Worcester Art Museum*

Study of basic ways and means for forming and understanding contemporary works in art and design. Illustrated lectures and criticisms of experiments done with simple materials in black and white and in color. Work in line, shape, patterns, volume, color, and space in drawing and painting. No previous formal training is required for the beginner. A review of fundamental ideas for the advanced student and professional worker in the field of advertising and industrial design, and teaching. Satisfies Fine Arts requirement.

Mon., Wed. and Fri., 8:00—9:50 P.M.

Geography

INTERSESSION

GEO.—S.16b THE GEOGRAPHY OF ECONOMIC DEVELOPMENT

J. William Birch, *Professor of Geography*

This course takes a theoretical and empirical view of the location of the major forms of economic activity in the world and discusses their association with different stages of economic development.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

SUMMER SESSION

*F.—GEO.—S.191 CARTOGRAPHY

Guy H. Burnham, *Instructor in Geography, Cartography*

A discussion of various graphic methods and their application to geographic data. Since emphasis will be placed upon the mastery of cartographic tools and instruments, this course should prove particularly helpful to those planning to enter government service or to do illustrative work. This course may be taken for double credit by special arrangement with the instructor.

Mon. through Fri., 1:30 P.M. and afternoon workshop.

GEO.—S261 URBAN GEOGRAPHY

Raymond E. Murphy, *Professor of Economic Geography*

The modern city from the geographic viewpoint, with emphasis on the American city.

Mon. through Fri., 9:15–10:25 A.M.

*GEO.—S.291 CARTOGRAPHY

Guy H. Burnham, *Instructor in Geography, Cartography*

Similar course to S.191 with additional work required for graduate credit.

Mon. through Fri., 1:30 P.M. and afternoon workshop.

Geology

INTERSESSION

F.—GEOL.—S.12a PHYSICAL GEOLOGY

Wesley E. Bryers, *Instructor in Geology*

Introduction to geology, origin of the earth, its development through time; the study of the common minerals and rocks, their structure, origin and occurrence; geological activities of the air, streams, and the sea; nature of glaciers, volcanoes and earthquakes, and the age of the earth. Laboratory work consists of mineral and rock identification.

Lectures: Mon. through Fri., 9:00 A.M. and 2:00 P.M.

Laboratory: Mon. and Wed., 1:30 P.M.–4:00 P.M.

SUMMER SESSION

F.—GEOL.—S.12b HISTORICAL GEOLOGY

Wesley E. Bryers, *Instructor in Geology*

This semester deals with the origin of continents and ocean basins, their development through time; the glacial periods and the antiquity of man; development of surface features of North America; and evolution of life through geologic time. Laboratory work consists of map interpretation and fossil identification.

One Lab to be arranged.

Mon. through Fri., 10:30–11:40 A.M.

*Double course, two classes daily through Summer Session

History

SUMMER SESSION

HIST.—S.210 EUROPE IN THE 18TH CENTURY

Daniel R. Borg, *Instructor in History*

18th century Europe emphasizing the Enlightenment and the French Revolution.
Mon. through Fri., 10:30–11:40 A.M.

HIST.—S.212 MODERN EUROPE 1918 TO THE PRESENT

Richard H. McKey, Jr., *Lecturer, Clark University Evening College*

A study of contemporary European History dealing with such questions as the nature and impact of World War I and II; the decline of traditional power systems and the rise of the super-states; the quest for a principle of international order and the Cold War; and the nuclear age.

Mon. through Fri., 8:00–9:50 P.M.

HIST.—S.215 GERMANY SINCE 1815

Daniel R. Borg, *Instructor in History*

Political and economic history of Germany since 1815.

Mon. through Fri., 8:00–9:10 A.M.

HIST.—S.231 AMERICAN FOREIGN POLICY SINCE THE FIRST WORLD WAR

Richard H. McKey, Jr., *Lecturer, Clark University Evening College*

A study of the forces in American Diplomatic History since World War I tracing the rise of the United States to great power status and world leadership. Special emphasis will be placed upon such areas as our approaches to The Versailles Settlement, Twentieth Century Isolationism, World War II Diplomacy, and The Cold War as an attempt to interpret the development and consideration of our present global foreign policy.

Mon. through Fri., 9:15–10:25 A.M.

INTERSESSION

HIST.—S.236 THE AMERICAN REVOLUTION, 1763–1789

George H. Merriam, *Director of Admissions, Lecturer in History*

The course is planned to cover carefully the growth of revolutionary opinion in the British colonies from the end of the Seven Years war to 1775, to describe the actual happenings of the Revolutionary War in some detail, with more attention given to the philosophical background of this period, and to show the reaction from revolution which came to fruition in the adoption of the Federal Constitution.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

Special Program

HIST.—S.336 INTERPRETING THE AMERICAN PAST

Robert F. Campbell, *Dean of the College and Professor of American History*

Henry C. Borger, Jr., *Dean of Students and Professor of Education*

George A. Billias, *Associate Professor of American History*

Gerald N. Grob, *Associate Professor of American History*

An intensive institute for secondary school history and social studies teachers co-sponsored by the Service Center for Teachers of History of the American Historical Association. Selected topics in American history will be analyzed and discussed with special attention to new viewpoints and recent interpretations. The Institute will run from June 24 to July 12 and will carry three semester hours credit. It will be given at the Conference Center and there will be two meetings each day, 8:30 A.M. and 3:00 P.M.

Mon. through Fri., 8:30 A.M. and 3:00 P.M.

LANGUAGES

French

INTERSESSION

F.—FR.—S.10 ELEMENTARY FRENCH REFRESHER

Mordecai Rubin, *Assistant Professor of Romance Languages*

An intensive three-week course in speaking and reading French, including laboratory work in pronunciation. Classes meet at 8:00 to 8:50 (Reading), 10:50 to 11:40 (Grammar), 2:00 to 2:50 (Pronunciation and Conversation). This course is recommended as a general refresher or as a substitute for the second half of French 11 at Clark. Auditors are welcome. Limited to 14 students.

Laboratory fee: \$10:00. Mon. through Fri., 8:00 and 10:50 A.M.; 2:00 P.M.

SUMMER SESSION

*F.—FR.—S.12 INTERMEDIATE FRENCH

Mordecai Rubin, *Assistant Professor of Romance Languages*

This course aims to develop the fundamental skills of pronunciation, conversation, grammar, reading. The approach will be conversational but will include carefully graded readings and laboratory work. Open to students who have had a first-year college course or the equivalent. Indivisible double course.

Laboratory fee; \$20.00 Mon through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

German

SUMMER SESSION

*F.—GER.—S.11 INTRODUCTORY GERMAN

Roger C. Norton, *Visiting Lecturer, Cedar Crest College, Allentown, Pa.*

A complete first year college course in German which will make extensive use of modern language teaching aids. Aural-oral practice. Early in the course the student will be introduced to a series of graded readers, which must be mastered by the end of the course and which are designed to prepare him for independent reading of German newspapers and journals. The course will demand the full time and attention of those interested. Laboratory optional.

Mon. through Fri., 8:00–9:10 A.M. and 11:30 A.M.–12:40 P.M.

*F.—GER.—S.12 INTERMEDIATE GERMAN

James S. Edwards, *Associate Professor of German*

Review of grammar, translation from and into German, rapid reading of modern German prose. An intensive course covering the material of the regular second year of college German. The course will demand the full time and attention of those interested. Laboratory optional.

Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

*Double course, two classes daily through Summer Session.

Italian

SUMMER SESSION

*F.—ITAL.—S.11 ELEMENTARY ITALIAN

Instructor to be announced

A beginning course in spoken and written Italian stressing the modern conversational approach. Classroom work will be supplemented by drills in the language laboratory. Indivisible double course.

Laboratory fee: \$20.00 Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

Spanish

SUMMER SESSION

*F.—SP.—S.11 INTRODUCTORY SPANISH

Raymond E. Barbera, *Associate Professor of Romance Languages*

For beginners. The elements of grammar and pronunciation; carefully graded reading; exercises in speaking and writing.

Laboratory fee: \$20.00

Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

Mathematics

SUMMER SESSION

*MATH.—S.11 FUNDAMENTAL OF MATHEMATICS ROBERT PERRY

Instructor to be announced

Elementary study of mathematical logic, postulational systems, algebra, point sets, analytic geometry, the concept of function, trigonometric functions, natural numbers, cardinal numbers, the concept of limit, and some brief attention to elementary probability and statistical inference.

Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

*MATH.—S.12 CALCULUS

Instructor to be announced

Introduction to differential and integral calculus; essential for further study in mathematics as well as for the study of applications in the natural and social sciences.

Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

MATH.—S.13 INTERMEDIATE CALCULUS

JOHN F. KENNISON

Instructor to be announced

Geometric and physical applications of integration, sequences and series, three-dimensional analytic geometry, partial differentiation, multiple integrals, and a brief introduction to differential equations.

Mon. through Fri., 9:15–10:25 A.M. and 2:00–3:10 P.M.

Philosophy

SUMMER SESSION

PHIL.—S.19b ESTHETICS

Jefferson A. White, *Assistant Professor of Philosophy*

The nature of art, the characteristics of esthetic experience, and the relation of art to the human enterprise as a whole. Special reference is made to representative figures in contemporary philosophy.

Mon. through Fri., 11:45–12:55 P.M.

*Double course, two classes daily through Summer Session.

PHIL.—S.119 BASIC ISSUES IN PHILOSOPHYJefferson A. White, *Assistant Professor of Philosophy*

Reading and discussion of materials concerned with some of the fundamental and recurring problems in philosophy. Subject for 1963: God, Freedom, Mind, Perception.
Mon. through Fri., 9:15–10:25 A.M.

INTERSESSION**Ed.—S.290b PHILOSOPHY OF EDUCATION**Robert N. Beck, *Professor of Philosophy*

The course description is given under Education.

Mon. through Fri., 3:45 P.M.–5:45 P.M.

Psychology**INTERSESSION****PSY.—S.11a GENERAL PSYCHOLOGY**Walter H. Crockett, *Associate Professor of Psychology*

Introduction to the principles of human behavior.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

SUMMER SESSION**PSY.—S.11b GENERAL PSYCHOLOGY**Ian P. Howard, *University of Durham, Durham, England*

The second half of the General Psychology course, begun in the Interession.

Mon. through Fri., 9:15–10:25 A.M.

PSY.—S.103b THE ABNORMAL PERSONALITYRobert W. Baker, *Associate Professor of Psychology*

Development of the abnormal personality and a survey of the major types of abnormal behavior.

Mon., Wed., and Fri., 8:00–9:50 P.M.

PSY.—S.125 PSYCHOLOGY OF LANGUAGEBernard Kaplan, *Associate Professor of Psychology*

A psychological analysis of the use of symbols in language, dreams, and myth.

Mon. through Fri., 10:30–11:40 A.M.

PSY.—S.170a SOCIAL PSYCHOLOGYWalter H. Crockett, *Associate Professor of Psychology*

The role of social factors in the behavior of individuals and of groups, including such topics as attitudes, prejudice, leadership and personality and culture.

Mon., Wed. and Fri., 6:00–7:50 P.M.

INTERSESSION**PSY.—S.172a PSYCHOLOGY OF PERSONALITY**Robert W. Baker, *Associate Professor of Psychology*

The various theoretical approaches to the study of personality, with emphasis on trait theories, typologies, field theory and psychoanalysis. Also considered are the determinants of personality development and methods of appraising personality.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

Sociology

INTERSESSION

SOC.—S.11a GENERAL ANTHROPOLOGY

Philip G. Olson, *Assistant Professor of Sociology*

The evolution and development of man in the primitive world. The bio-social basis of man and culture; the elaboration of the social life of primitive man. The nature of primitive culture, and its distribution throughout the world. An analysis of primitive social structure, values, religion and culture change. Essential for sociology majors.

Mon. through Fri., 9:00 A.M. and 2:00 P.M.

SUMMER SESSION

SOC.—S.11b PRINCIPLES OF SOCIOLOGY

Frederick W. Killian, *Associate Professor of Sociology*

The development of man's world—the social, the normative, structure and function, some fallacies in sociological thinking, social action and interaction, social change and planning, social institutions.

Mon. through Fri., 10:30–11:40 A.M.

SOC.—S.19 SOCIAL CONTROL, SOCIAL CHANGE AND POLITICAL INSTITUTIONS

Frederick W. Killian, *Associate Professor of Sociology*

This course (a study in political sociology) will deal with changing political ideas, governmental structures and functions. It is a sociological and an anthropological interpretation of the use and growth of political controls. The conceptual emphasis is on "social change"; the contextual emphasis is on the American scene. It is not a descriptive course in American, European or ancient government. The course deals with: the application and implementation of power and authority; older types of political controls; current trends and changes in American political institutional life.

Mon. through Fri., 11:45 A.M.–12:55 P.M.

SOC.—S.24a THE COMMUNITY

Philip Olson, *Assistant Professor of Sociology*

An analysis of community studies as the basis for understanding society, with particular reference to American society. The community as a form of social organization with psychological, political, and economic underpinnings. The rise of centralized institutions and the transformation of community in twentieth century America: the links between community social structure and the total society. The historical decline of community and the emergence of pseudo-communities. The course will focus on a comparative analysis of the major American community studies. Prerequisite: SOC—11b

Mon., Wed. and Fri., 8:00–9:50 P.M.

COURSE SCHEDULE

INTERSESSION, JUNE 10 - JULY 29

Ec. —S.11a	Principles of Economics	Van Tassel	All Interession classes meet twice daily Monday through Friday at 9:00 A.M. and 2:00 P.M. with the exception of Ed. 290b which meets 3:45 P.M.—5:45 P.M. and Fr. S.10 which meets 8:00 and 10:50 A.M. and 2:00 P.M.
Ed. —S.290b	Philosophy of Education	Beck	
Eng. —S.103	The Comic Spirit in English and American Literature	Carter	
Eng. —S.113	Shakespeare	Anderson	
F.A. —S.12	Introduction to Music	Raffman	
F.A. —S.15	The Art of the High Renaissance in Italy	Cowardin	
Fr. —S.10	Elementary French Refresher	Rubin	
Geo. —S.16b	The Geography of Economic Development	Birch	
Geol. —S.12a	Physical Geology	Bryers	
Hist. —S.236	The American Revolution, 1763-1789	Merriam	
Psy. —S.11a	General Psychology	Crockett	
Psy. —S.172a	Psychology of Personality	Baker	
Soc. —S.11a	General Anthropology	Olson	

SPECIAL PROGRAM - JUNE 24 - JULY 12

Hist. —S.336	Interpreting the American Past	Campbell, Borger, Billias, Grob	8:30 A.M. and 3:00 P.M.
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SUMMER SESSION, JULY 1 - AUGUST 17

Bio. —S.11a	General Biology—The Plant Kingdom especially in its Relation to Man	Nilsson	10:30 A.M. and Labs
Bio. —S.17	General Ecology	Nilsson	11:45 A.M. and Labs
Bio. —S.300	Research in Biology	Staff	
*B.A. —S.16	Business Statistics	Hargest	9:15 A.M. and 2:00 P.M.
B.A. —S.17	Public Speaking	Beard	8:00 P.M.
B.A. —S.18	Corporation Finance	Bamford	10:30 A.M.
B.A. —S.109	Sales Management	Balko	8:00 P.M.
B.A. —S.132	Human Relations in Industry	Bamford	9:15 A.M.
B.A. —S.152b	Advertising Management	Balko	6:00 P.M.
Ec. —S.11b	Principles of Economics	To be announced	8:00 A.M.
Ec. —S.140b	Consumer Economics	Melder	9:15 A.M.
Ec. —S.211b	Comparative Economic Systems	Melder	11:45 A.M.
Ed. —S.202	Educational Psychology	Jones	11:45 A.M.
Ed. —S.207	Use of Audio-Visual Materials in Teaching	Borger	6:00 P.M.
Ed. —S.229	Tests & Evaluation in Teaching and Guidance	Jones	6:00 P.M.
Ed. —S.263a	Methods and Materials in the Elementary School — Principles and Demonstrations	Shepherd	9:15 A.M. beginning July 1 for three weeks
(Hist.) —S.336	Interpreting the American Past	Borger, Campbell, Billias, Grob	8:30 A.M. and 3:00 P.M. June 24 - July 12
Eng. —S.11b	English Composition and Literature	Sultan	6:00 P.M.
Eng. —S.12	Public Speaking	Beard	8:00 P.M.
Eng. —S.106	Contemporary American Fiction	Beard	6:00 P.M.
Eng. —S.145	Darwinism	Blinderman	6:00 P.M.
Eng. —S.146b	Literature of Western Civilization	Blinderman	8:00 A.M.
Eng. —S.150	Modern British and American Drama	Sultan	9:15 A.M.

* Double course, two classes daily through Summer Session.

F.A. —S.195	Introduction to Contemporary Art	Murphey	8:00 P.M.
*Geo. —S.191	Cartography	Burnham	1:30 P.M.
*Geo. —S.291	Urban Geography	Murphy	9:15 A.M.
Geo. —S.261	Cartography	Burnham	1:30 P.M.
Geol. —S.12b	Historical Geology	Bryers	10:30 A.M.
Hist. —S.210	Europe in the 18th Century	Borg	10:30 A.M.
Hist. —S.212	Modern Europe 1918 to the Present	McKey	8:00 P.M.
Hist. —S.215	Germany Since 1815	Borg	8:00 A.M.
Hist. —S.231	American Foreign Policy Since the First World War	McKey	9:15 A.M.
Hist. —S.336	Interpreting the American Past	Borger, Campbell, Billias, Grob	8:30 A.M. and 3:00 P.M. June 24 - July 12
*Fr. —S.12	Intermediate French	Rubin	9:15 A.M. & 2:00 P.M.
*Ger. —S.11	Introductory German	Norton	8:00 A.M. & 11:30 A.M.
*Ger. —S.12	Intermediate German	Edwards	9:15 A.M. & 2:00 P.M.
*Ital. —S.11	Elementary Italian	To be announced	9:15 A.M. & 2:00 P.M.
*Sp. —S.11	Introductory Spanish	Barbera	9:15 A.M. & 2:00 P.M.
*Math. —S.11	Fundamental of Mathematics	To be announced	9:15 A.M. & 2:00 P.M.
*Math. —S.12	Calculus	To be announced	9:15 A.M. & 2:00 P.M.
*Math. —S.13	Intermediate Calculus	To be announced	9:15 A.M. & 2:00 P.M.
Phil. —S.19b	Esthetics	White	11:45 A.M.
Phil. —S.119	Basic Issues in Philosophy	White	9:15 A.M.
Psy. —S.11b	General Psychology	Howard	9:15 A.M.
Psy. —S.103b	The Abnormal Personality	Baker	8:00 P.M.
Psy. —S.125	Psychology of Language	Kaplan	10:30 A.M.
Psy. —S.170a	Social Psychology	Crockett	6:00 P.M.
Soc. —S.11b	Principles of Sociology	Killian	10:30 A.M.
Soc. —S.19	Social Control, Social Change and Political Institutions	Killian	11:45 A.M.
Soc. —S.24a	The Community	Olson	8:00 P.M.

* Double course, two classes daily through Summer Session.

Please send me a registration card for the 1963 Clark University Summer School so that I may preregister.

My academic status is:

College Graduate ☐ College Undergraduate ☐

Special Student ☐ Clark University Evening College ☐
(not a degree candidate)

I (have, have not) previously attended the Clark University Summer School.

NAME

ADDRESS

City Zone State

Return to

SUMMER SCHOOL OFFICE, CLARK UNIVERSITY,
950 MAIN STREET, WORCESTER, MASS.

INTERSESSION: JUNE 10 to JUNE 29

Classes meet daily, Monday through Friday—9:00 to 10:10 A.M. and 2:00 to 3:10 P.M.
(Except Ed.—S.290b, 3:45 P.M.-5:45 P.M. & FR.—S.10 8:00 and 10:50 A.M. and 2:00 P.M.)

Ec. S.11a	Principles of Economics	F.A. S.12	Introduction to Music	Geol. S.12a	Physical Geology
Ed. S.290b	Philosophy of Education	F.A. S.15	The Art of the High Renaissance in Italy	Hist. S.236	The American Revolution, 1763-1789
Eng. S.103	The Comic Spirit in English and American Literature	Fr. S.10	Elementary French Refresher	Psy. S.11a	General Psychology
Eng. S.113	Shakespeare	Geo. S.16b	The Geography of Economic Development	Psy. S.172a	Psychology of Personality
				Soc. S.11a	General Anthropology

SUMMER SESSION: JULY 1 - AUGUST 17

Morning Classes meet daily

Monday Through Friday—3 credits

8:00 to 9:10	Ec. S.11b	Principles of Economics
9:15 to 10:25	Eng. S.150	Literature of Western Civilization
	Hist. S.215	Germany Since 1815
	B.A. S.132	Human Relations in Industry
	Ec. S.140b	Consumer Economics
	Ed. S.263a	Methods and Materials in the Elementary School—Principles and Demonstrations
	Eng. S.146b	Modern British and American Drama
	Geo. S.261	Urban Geography
	Hist. S.231	American Foreign Policy Since the First World War
	Phil. S.119	Basic Issues in Philosophy
	Psy. S.11b	General Psychology

10:30 to 11:40	B.A. S.18	Corporation Finance
	Bio. S.11a	General Biology—The Plant Kingdom
	Geol. S.12b	Historical Geology
	Hist. S.210	Europe in the 18th Century
	Psy. S.125	Psychology of Language
	Soc. S.11b	Principles of Sociology

11:45 to 12:55	Bio. S.17	General Ecology
	Ec. S.211b	Comparative Economic Systems
	Ed. S.202	Educational Psychology
	Phil. S.19b	Esthetics
	Soc. S.19	Social Control, Social Change and Political Institutions

1:30 P.M.	Geo. S.191	Cartography
	Geo. S.291	Cartography

Evening Classes meet Monday, Wednesday and Friday—3 credits (except Ed.—S.229 which meets Tues. and Thurs. 6:00-8:45 P.M.)

6:00 to 7:50	B.A. S.152b	Advertising Management
	Eng. S.145	Darwinism
	Ed. S.207	Use of Audio-Visual Materials in Teaching
	Eng. S.11b	English Composition and Literature
	Eng. S.106	Contemporary American Fiction
	Psy. S.170a	Social Psychology

6:00 to 8:45	Ed. S.229	Tests and Evaluation in Teaching and Guidance (Tues. and Thurs.)
	B.A. S.17	Public Speaking
		Eng. 12 Public Speaking

8:00 to 9:50	B.A. S.109	Sales Management
	F.A. S.195	Introduction to Contemporary Art
	Hist. S.212	Modern Europe 1918 to the Present
	Psy. S.103b	The Abnormal Personality
	Soc. S.24a	The Community

B.A. S.16	Business Statistics
Fr. S.12	Intermediate French
Ger. S.11	Introductory German
Ger. S.12	Intermediate German
Ital. S.11	Elementary Italian

SPECIAL PROGRAM

JUNE 24 - JULY 12

Hist. S.336

Interpreting the American Past
(Borger, Campbell, Billias, Grob)

8:30 A.M. and 3:00 P.M.
3 credits

TWICE DAILY COURSES

Two Class Meetings Monday, through Friday—
9:15 and 2:00 (except Ger. S.11—8:00-9:10 A.M. and 11:30-12:40 P.M.).

Sp. S.11	Introductory Spanish
Math. S.11	Fundamental of Mathematics
Math. S.12	Calculus
Math. S.13	Intermediate Calculus



